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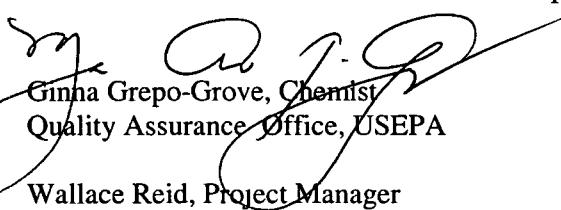
**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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1200 Sixth Avenue  
Seattle, Washington 98101**

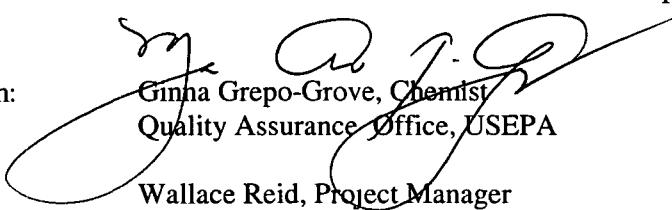
January 28, 2003

Reply to  
Attn of  
**MGREPOGR  
OEA-095**

**MEMORANDUM**

**Subject:** Data Validation Report for Polynuclear Hydrocarbon (PNAs), Semi-volatile Organic Compound (SVOC), PCB Aroclor (PCBs), Pesticide (Pest), Percent Solids (% solids), Grain Size and Total Organic Carbon (TOC) Analyses of Sediment Samples Collected for the Portland Harbor RI/FS Round 1 Sampling Event

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USEPA SF



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The quality assurance (QA) review of the analytical data generated from the analysis of 12 sediment samples collected from the above referenced site has been completed. Note: The Forms I or the sample data sheets submitted by the lab has an LWG01 prefix on all samples. The sample numbers listed in this report are exactly as they were written on the Chain-of-Custody Record and Laboratory Analysis Request Forms and the first 5 samples do not have an LWG01 prefix on the COC. The following samples were evaluated in this validation report.

**Table1 - Sample Numbers, and Dates of Sample Collection and the Verified Time of Sample Receipt in the Laboratory (VTSR)**

Sample Numbers	ARI's Sample Numbers	Date of Sample Collection	VTSR
07B023SDS015COO	EW86A	10/10/02	10/15/02
07B024SDS015COO	EW86B	10/10/02	10/15/02
08B032SDS015COO	EW86C	10/10/02	10/15/02
09B024SDS015COO	EW86D	10/10/02	10/15/02
09B026SDS015COO	EW86E	10/10/02	10/15/02

Sample Numbers	ARI's Sample Numbers	Date of Sample Collection	VTSR
LWG0103B030SDS015COO	EW86F	10/11/02	10/15/02
LWG0103B031SDS015COO	EW86G	10/11/02	10/15/02
LWG0103B033SDS015COO	EW86H	10/14/02	10/15/02
LWG0104B023SDS015COO	EW86I	10/11/02	10/15/02
LWG0104B024SDS015COO	EW84J	10/11/02	10/15/02
LWG0105B018SDS015COO	EW86K	10/11/02	10/15/02
LWG0105B018SDS015COO	EW86L	10/11/02	10/15/02

Table 2 lists the suite of parameters, clean-up and analytical methods used in the analyses.

Parameters	Methods	
	Clean-ups	Analysis
PNA's	3640A, 3630A	SW846 - Modified Method 8270C SIM
SVOCs	3640A	SW846 - Method 8270C
PCB (Aroclors)	3640A, 3620C, 3665A	SW846 - Method 8082
Pesticides	3640A, 3620C	Analysis SW846- Method 8081A
Metals		SW 846 Methods 6010, 7761, 7060A, 7421, 7131A, 7041, 7040, 7471
TOC		Plumb et al , 1981
%solids		EPA 160 3/SM 2540B
Grain Size		ASTM D422-63

All of the analyses were performed by Analytical Resources Incorporated (ARI) of Tukwila, WA.

## DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control specifications outlined in the Quality Assurance Project Plan, the laboratory's Standard Operating Procedures, the analytical methods listed above and the Contract Laboratory Program's National Functional Guidelines for Organic and Inorganic Data Review. Some of the data quality elements were qualified using the reviewer's professional judgment.

The conclusions presented herein are based on the information provided for the review.

## **Chain-of Custody Records**

Striplin Environmental Associates (SEA) used ARI's Chain of Custody (COC) Record & Laboratory Analysis Request Form (pages 000002 and 000003 of the data package). The COC documentation and the analytical data should be consistent and should have all the necessary information to validate the preservation and maintenance of the samples' integrity. The data package and COC documentation should be legally defensible and be able to stand on their own.

On page 000003, the following discrepancies were noted: (1) the seventh column in the Analysis Request is labeled "Cooler # TBT" then "TBT" on the next row below. TBT is one of the target compounds for some of the sediment samples and to name a cooler "TBT" listed on the Analysis Required column is inappropriate and confusing. If coolers need to be named, the cooler name should be listed in the notes/comments section of the COC form, (2) the COC page has no notation specifying that the samples listed will have an LWG01 prefix attached to them. The laboratory logged-in and reported the samples with LWG01 prefix on all samples, (3) the conditions of the samples upon receipt were not documented by the lab in the COC (page 000002 and 000003), and (4) the Subcontractor Analysis Request Custody Transfer Form for Grain Size Analysis is submitted as a part of the COC documentation but the Sample Log-in Forms and Sample Control Forms were not

For legal documentation and consistency, the COC documentation, the Case Narrative, raw data and data reported will need to be reconciled. The following are the recommendations to resolve the discrepancies and inconsistencies listed above. (1) SEA should provide documentation or written communication to the lab stating that the "TBT" in the Analysis Required column 7 of the COC for sample delivery group (SDG) B01-0134C is actually the name of the cooler and not a request for TBT analysis (2) the sample names should be reported exactly as it is written on the COC or SEA should provide documentation stating that all of the samples for this SDG have an LWG01 prefix (3) the laboratory should provide documentation indicating the conditions of the samples upon receipt and (4) the sample log-in records/ sample control logs must be included in the COC package. All applicable documentation should be included in the COC package.

## **Samples' Condition upon Receipt**

All of the samples were received by the laboratory frozen with containers broken. The temperature blank in each cooler registered surface temperatures ranging from 2- 4 °C. Each of the broken sample container was stored in individual Ziploc bags so cross-contamination was prevented. However, due to the high probability of contaminating the samples with phthalates due to the plastic Ziploc bags, based on the reviewer's professional judgment, the phthalates detected in the samples were qualified as tentatively identified at an estimated concentration, "JN".

## **Holding Time - Acceptable**

All of the samples were received frozen by the laboratory. Each of the sediment sample container was stored in individual Ziploc bags. The laboratory kept the samples frozen until extraction and analysis.

All of the samples met both the extraction and analytical holding times criteria specified in the QAPP and the methods for each suite of parameters. Table 3 lists the dates of extraction/prep and analysis for each sample per parameter or suite of parameters analyzed. None of the data were qualified on the basis of holding times.

#### **Sample Preparation - Acceptable**

All of the samples were prepared in accordance with the methods/SOPs specified in the QAPP. None of the data were qualified on this basis.

#### **Target Compounds and Reporting Limits**

All of the target compounds were reported on a dry-weight basis and were adjusted for sample amount extracted and dilution factors. All of the samples for organics analysis went through the initial GPC clean-up. Additional clean-up techniques for organic extracts were employed for each suite of parameters to remove interferences.

**Metals.** There were no sediment Analytical Concentration Goals (ACGs) listed for the inorganic target analytes in the QAPP. All of the target analytes listed in the QAPP were analyzed by the lab at the method reporting limits specified in the QAPP. None of the data were qualified on this basis

**Pesticides:** The laboratory analyzed the samples for all of the pesticide target compounds listed in the QAPP at the reporting limits specified in the QAPP. Larger sample amounts and sample extracts and extra clean-ups were used by the lab to get their reporting limits about 10x lower than the commonly used CLP reporting limits. Even with these sample processing modifications, only the compounds hexachlorobutadiene and hexachlorobenzene's reporting limits met the sediment ACGs listed in the QAPP for pesticides. Hexachlorobutadiene and hexachlorobenzene were also analyzed as part of the SVOC list. It is recommended that the data users utilize the hexachlorobenzene and hexachlorobutadiene results from the pesticide analysis and use the SVOC results for confirmation.

The reporting limits for some of the pesticide target compounds had to be raised and flagged "Y" by the lab due to interferences. These compounds were qualified as non-detects, "U", by the reviewer.

DDT and by-product isomers were initially detected in samples 07B023SDS015C00 and 07B024SDS015C00 at concentration levels that are over the instrument's calibration range. These compounds were qualified as estimated, "J", by the reviewer. It is recommended that data users utilize the unqualified DDT and isomers data from the dilution run of these two samples.

**PCBs as Aroclors:** All of the samples for PCB analyses had undergone three clean-up levels. The PCB Aroclors were reported at the method reporting limits specified in QAPP (about 10x lower than the commonly used CLP reporting limits). However, none of the QAPP-specified ACGs for Aroclors 1242, 1248, 1254 and 1260 were met.

The PCB Aroclors reported for the following samples were raised and flagged "Y" by the laboratory due to interferences and were qualified as non-detects, "U", by the reviewer. : (1) Aroclors 1254 and 1260 for

LWG0104B024SDS015C00.

SVOC's: All of the compounds listed for SVOCs analysis in the QAPP were analyzed by the lab using full scan Method 8270C. The following compounds were added by the lab to the SVOC list and removed from the QAPP- specified SIM list because these compounds will be stripped and lost during the clean-up process: 2,3,4,6-tetrachlorophenol, 2,3,4,5-tetrachlorophenol, 2,3,5,6-tetrachlorophenol and 1,2-diphenylhydrazine (reported as Azobenzene).

Modified Method 8270 SIM: This analysis was designed to get lower reporting limits for heavy PNA's and other SVOC compounds. All of the samples for this analysis went through special extract clean-up techniques prior to analysis. The laboratory analyzed the samples in accordance with the method/SOP specified in the QAPP. The laboratory also included hexachloroethane in the target list for this analysis.

The initial SIM analysis of sample LWG0104B024SDS015C00 yielded results that were over the instrument's calibration range for the following PNAs: benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene. These PNA's were flagged as estimated, "J", by the reviewer. Also, most of the heavy PNAs listed above will need to be qualified based on internal standards criteria. Therefore, it is recommended that the data users utilize the concentrations reported from the full scan SVOC run for the compounds listed above including dibenz(a,h)anthracene for this sample. The reviewer recommends however, that the SIM results reported for carbazole, dibenzofuran, PCP and hexachloroethane be used by data users. These compounds were not affected by the internal standard issue.

Conventional Analyses: All of the samples were analyzed for TOC, grain size and percent (%) solids in accordance with the analytical methods specified by the QAPP

### Instrument Performance

All of the instruments used in the analyses met the instrument performance criteria and the analytical sequence specified by the analytical methods except for the following: the Mod. 8270C SIM analysis for these samples were conducted outside the 12-hour QC limit:

- LWG0105B018SDS15C00
- Standard Reference Material (SRM-SQ1).

Both of these samples were analyzed outside the 12-hour window on 12/18/02 and re-analysis are not performed. The SIM results for the sample were not qualified on this basis due to the following reasons: (1) the tuning and instrument performance of the same GC/MS instrument (NT4) the following day (12/19/02) was acceptable, (2) the SRM-SQ1 recoveries were within acceptable limits and (3) most of the detected compounds in the SIM analyses were also detected in the full scan SVOC run of the sample LWG0105B018SDS15C00. The detected PNAs in the SVOC should be used for this sample instead of the SIM values. Also, some of the SIM results for this sample will be qualified based on other QA elements and will be discussed in the internal standard section of this report.

### **Initial Calibrations - Acceptable**

The initial calibrations performed for each suite of parameters met the technical acceptance criteria and the required frequency of analysis specified in the analytical methods. The initial calibrations included the analysis of at least one low standard at the laboratory's Method Reporting Limits (MRL). None of the data were qualified on this basis.

**Metals using ICP-AES:** Aluminum, chromium, copper, nickel and zinc were analyzed using the ICP-AES Method 6010B. The ICP-AES instrument was initially calibrated according to the method specified in the QAPP. The initial calibration verification (ICVs) standards analyzed had acceptable recoveries ranging from 90-110%. No discrepancies were noted in the raw data submitted.

**Metals using GFAA:** Antimony, arsenic, cadmium, lead, selenium and silver were analyzed using GFAA methods 7000 series. The instruments were initially calibrated with a blank and standards at 3 concentration levels. All of the initial calibration curves for each of the analyte listed above were acceptable with correlation coefficients  $>0.995$ . The initial calibration verification (ICVs) standards analyzed had acceptable recoveries ranging from 90-110%.

Based on the review of the GFAA raw data, the following issues need to be addressed by the laboratory in both the Case Narrative and the GFAA raw data pages.

- The dates of analysis stamped on all GFAA runs were incorrect (September and January, 2002). The analyst wrote the actual date of analysis only on the first page of the raw data for every GFAA analytical sequence. There were no notations and/or corrections on the following GFAA raw data pages. Also, the hand-written corrections on the GFAA dates of analysis were not initialed nor dated by the analyst.
- There is no consistency in initialing and/or dating the crossed-out and corrected entries in the GFAA raw data

For legal documentation and traceability, it is recommended that (1) the laboratory analyst make the necessary notations and/or date corrections and initial and date all the pages affected by the above-listed issues (pp. 001923 - 002064) and (2) the laboratory should address in their Case Narrative why the analysis dates and time stamp for all GFAA analyses were incorrect.

**Mercury Using CVAA:** The samples were analyzed in accordance with the 7000 series method specified in the QAPP. Standards at 3 concentration levels and a blank was analyzed for the initial calibration yielding correlation coefficient  $>0.995$ . The initial calibration verification (ICVs) standards had acceptable recoveries ranging from 98-105%.

**Organics Analysis (SVOCs, SIM, pests and PCBs):** The frequency of analysis, the concentration levels, the percent relative standard deviations (%RSDs), the minimum response factors and retention times

criteria for the project's compounds of concern (COCs) were met by all of the initial calibration curves analyzed for the above-listed suite of parameters.

For PCBs, five concentration levels of Aroclors 1016 and 1260 and surrogates were analyzed for the initial calibration. The other target Aroclors were analyzed at one concentration level in the initial calibration. The instrument ECD1 with dual columns DB5 and DB-608 were used in all PCB analysis.

The instrument ECD4 with columns CLP Pest1 and CLP Pest2 were used in all pesticide analysis. The percent endrin and DDT breakdowns were within acceptable limits (<20%).

### **Continuing Calibrations - Acceptable**

All of the continuing calibration verification standards (CCVs) associated with the samples met the criteria for frequency of analysis, the applicable recovery criteria, ion abundance ratios, retention times windows, chromatographic resolutions, percent differences (%D) and/or relative percent differences (RPDs) between the initial calibrations' mean and daily instrument response or calibration factors.

### **Compound Identification**

All of the detected compounds reported met the identification, retention time and/or USEPA mass spectral matching criteria specified by the methods except for the following:

- Dibenz(a,h)anthracene detected at low levels in the SIM analysis of some of the samples. However, due to interferences, the dibenz(a,h)anthracene produced weak spectra. The laboratory flagged these dibenz(a,h)anthracene data with an "M" qualifier, the data reviewer crossed out the "M" flag and replaced it with the estimated flag, "J".
- Based on the %Ds between two columns and retention time shifts caused by interferences, some of the pesticide and PCB compounds detected at low levels in some of the samples were qualified as non-detects and reported at raised reporting limits

### **Blanks**

The frequency of analysis of laboratory blanks was met. None of the target compounds were detected in all of the blanks analyzed for all suite of parameters. The SIM method blank was analyzed twice due to the out of control IS areas. Since this discrepancy does not affect the quality of the sample results submitted, none of the data results reported were qualified on this basis.

### **Internal Standards (IS) Areas and Retention Times**

All of the IS areas and retention times in the SVOCs and PNAs analysis of all samples met the method-specified area and retention time criteria with the exception of the following:

- IS#5 (d12-perylene) area of the initial analysis of the Method Blank was outside the

acceptable lower limit. The Method Blank was re-analyzed, and IS #4 and IS#5 areas were outside the acceptable lower limit. Because none of these out of control IS were used in the sample results calculation, none of the data from the associated samples were qualified on this basis.

- IS # 5 (d12-perylene) areas for samples LWG0104B024SDS015COO and LWG0105B018SDS015COO were outside the method required upper limits. The results associated with the out of control IS in samples LWG0104B024SDS015COO and LWG0105B018SDS015COO were qualified as estimated, "J". It is recommended that for sample LWG0104B024SDS015COO, data users should only utilize the SIM results for carbazole, dibenzofuran, PCP and hexachloroethane. These compounds were not affected by the IS issue. For the rest of the PNA results, data users should use the SVOC run. For sample LWG0105B018SDS015COO, it is recommended that data users only utilize the SIM results carbazole, dibenzofuran, dibenz(a,h)anthracene, PCP and hexachloroethane. For the rest of the PNA results, data users should use the SVOC run.

#### **Laboratory Control Samples/Duplicate (LCS/LCSD) - Acceptable**

The frequency of analysis and the project-required recovery criteria were met by all of the LCS and LCSD sets analyzed for each suite of parameters. The implications of LCS/LCSD recoveries on the quality of the data were evaluated with the other QA elements measuring the accuracy of the whole analytical system. None of the reported data results were qualified on this basis.

#### **Surrogate Recoveries**

**8270C SIM Analysis:** The surrogates used for SIM analysis were d10-2-methylnaphthalene (MNP) and d14-dibenz(a,h)anthracene (DBA). The DBA recovery for sample LWG0103B030SDS015C00 (182%) exceeded the project required recovery range (see Table A7-6 of the QAPP). Due to possible high bias, the detected sample results associated with the out of control surrogate were qualified estimated, "J", by the reviewer.

**SVOC Analysis:** The same CLP surrogate compounds were used as surrogates for the SVOC analysis. The surrogate, 2,4,6-tribromophenol recovery (130%) in sample 07B024SDS015C00 was outside the control limits (see Table A7-6 of the QAPP). Since all of the other acid surrogate recoveries were acceptable, none of the associated results were qualified on this basis.

**Pest/PCB Analyses:** The pesticides and PCB Aroclor analyses used the same surrogates, tetrachloro-m-xylene (TCMX) and decachlorobiphenyl (DCB). All of the samples and QC samples met the pests and PCB project-required surrogate recovery limits (see Table A7-6 of the QAPP) except for the DCB recovery (151%) for the PCB analysis of sample 07B024SDS015C00, indicating high bias in the associated results. Since none of the PCB Aroclors were detected in the sample, no qualifiers were applied.

**Grain Size:** The grain size QC recoveries for all samples were acceptable and ranged from 98 -103%

None of the data were qualified on this basis.

### **Standard Reference Material (SRM)**

The frequency of analysis and the recovery limits were met by all of the SRMs analyzed for each suite of parameters except for silver. Since all of the other QC parameters for silver yielded acceptable results, none of the silver results in the associated samples were qualified on this basis.

### **Matrix Spike and Matrix Spike Duplicate (MS/MSD)**

Sample 07B024SDS015C00 was the designated QC sample for all MS and MSD analysis

**SIM Analysis:** Based on the QAPP, phenanthrene, chrysene and benzo(k)fluoranthene should be used as spike compounds for MS/MSD analyses. Phenanthrene was not included in the SIM target list. The laboratory used chrysene and benzo(k)fluoranthene for the SIM analysis. Recoveries for both chrysene and benzo(k)fluoranthene cannot be accurately calculated due to the presence of these compounds in the sample. None of the SIM data were qualified on this basis.

**SVOC Analysis.** The routine CLP spike compounds were used for MS/MSD analysis for this project. All of the MS and MSD recoveries were within the project-required control limits (see Table A7-6 of the QAPP). None of the SVOC data were qualified on this basis.

**Pest Analysis:** The routine CLP pesticide spike compounds were used for the MS/MSD analysis for this project. All of the MS/MSD spike recoveries and RPDs were within the project-required control limits (see Table A7-6 of the QAPP). None of the data were qualified on this basis.

**PCB Analysis:** Aroclor 1242 was used as the spike compound for PCB analysis. All of the PCB MS/MSD recoveries and RPDs were within the project-required control limits (see Table A7-6 of the QAPP) None of the data were qualified on this basis.

**Metals Analysis:** The spike recoveries for all inorganic target analytes were met except for aluminum (333%) and antimony (223%) spike recoveries. Aluminum was detected in the sample at a concentration that was >4x the value of the spike. None of the aluminum results were qualified on this basis. The antimony recovery was very low and indicates low bias in the associated results. The detected antimony in the associated samples were qualified estimated, "J" and the non-detects were qualified as unusable, "R".

**GFAA Analysis:** The frequency of analysis and the recovery criteria were met by all of the GFAA analyses conducted. All of the sample analyses had double injections/double burns. The %RSDs between burns of detected analytes at concentrations >2.6RLs were all within 20%. None of the data were qualified on this basis

**TOC Analysis.** The spike recovery for TOC was 99.4% and acceptable. None of the TOC data were qualified on this basis

### Duplicate/Tripleate Sample Analysis

**Metals:** All of the initial and duplicate analytical results were within the project-required RPD limits except for chromium and nickel's RPD which were 99 % and 76%, respectively. The chromium and nickel in the associated samples were qualified estimated, "J".

**Percent Solids:** The initial and duplicate percent solid analyses analytical results were within the project-required RPD. None of the percent solid data were qualified on this basis.

**TOC.** The TOC analysis required triplicate analysis of the designated QC sample. The %RSD obtained from these analyses were within acceptable limits. None of the TOC data were qualified on this basis.

**Grain Size:** Grain size analysis required triplicate analysis of the designated QC sample. The %RSDs obtained from the triplicate analysis of the designated QC sample were <20% for all phi sizes (-3 to 10 phi range) except for the %RSDs for phi sizes 3 and 4 (fine and very fine sand fractions) which are 64% and 78%, respectively. None of the grain size data at phi sizes 3 and 4, however, were qualified due to %RSDs. Data users, however, are cautioned that great variability exists at the fine and very fine sand fractions of the samples.

### Analytical Sequence - Acceptable

All of the standards, blanks, samples and QC samples for each suite of parameters were analyzed in accordance with the method- specified analytical sequence. None of the data were qualified on this basis.

### Serial Dilution - Acceptable

All of the compounds detected at concentrations that were >50x the MRL met the project-required %D limits. None of the inorganic data were qualified on this basis.

### ICP Interference Check Samples (ICS) - Acceptable

The frequency of analysis and recovery limits for ICSAB were met. The ICSAB recoveries ranged from 89 - 110%. None of the data were qualified on this basis

### Laboratory Contact

Striplin Environmental and the laboratory were contacted to obtain/clarify the following (1) SOP for the PNA SIM Analysis and PNA SIM MDL. The SOPs were sent via e-mail on the same date. Striplin QA Manager, Laura Jones, was contacted by the QA reviewer to inform her that the laboratory did not submit TIC reports as a part of the full scan SVOC deliverable.

Manager, Laura Jones, was contacted by the QA reviewer to inform her that the laboratory did not submit TIC reports as a part of the full scan SVOC deliverable.

### **Overall Assessment**

To date, EPA is still waiting for the submission of sediment herbicides data package. There were no significant problems encountered with the validation of organic analyses. All of the samples were analyzed in accordance with the method, SOP and QAPP specifications. The data, as qualified, can be used for all purposes, provided, the following documents are submitted to EPA and included in the package:

#### From the laboratory:

- (1) TIC search and identification per sample from the SVOC runs
- (2) The laboratory must include in their Case Narrative the explanation for the following issues
  - the reason/s why the analysis dates stamp for all GFAA analysis were incorrect
  - reconcile the COC documentation, Case narrative and data reported as specified in the “chain of custody records” section of this validation report.
- (3) the laboratory must correct the date of analysis stamped on all GFAA raw data pages 001923 - 002064
- (4) the laboratory must initial and date all of the crossed-out entries either at the bottom of each page or beside each crossed-out entry.

#### From SEA:

- (1) SEA should provide documentation or written communication to the lab stating that the “TBT” in the Analysis Required column 7 of the COC for sample delivery group (SDG) B01-0134C is actually the name of the cooler and not a request for TBT analysis .
- (2) SEA should provide documentation stating that all of the samples for this SDG have an LWG01 prefix.

SEA QA Manager is advised to make sure that their contracted data validator checked the issues listed above especially the date stamp on the GFAA runs.

Table 3 -Dates of sample extraction and analysis dates per suite of parameters analyzed

Sample <sup>1</sup> Numbers	PNAs, SVOC's Pest, PCB Prep	Analyses				Metals										Percent Solids (%)	TOC	Grain Size	
						ICP Prep	Analysis	GFAA Prep	Analysis						Hg				
		PNAs	SVOCs	Pest	PCBs				Sb	As	Cd	Pb	Se	Ag	CVAA Prep	Analysis		Analysis	Analysis
07B023	12/02/02	12/17/02	12/12/02	12/14/02	12/26/02	12/05/02	12/17-20/02	12/05/02	12/13/02	12/11/02	12/16/02	12/16/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	12/04/02	12/09/02
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03B031	12/02/02	12/17/02	12/13/02	12/14/02	12/26/02	12/05/02	12/17-20/02	12/05/02	12/13/02	12/11/02	12/16/02	12/16/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	2/05/02	12/09/02
03B033	12/02/02	12/17/02	12/13/02	12/14/02	12/27/02	12/05/02	12/17-20/02	12/05/02	12/13/02	12/11/02	12/16/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	2/05/02	12/09/02	
04B023	12/02/02	12/18/02	12/13/02	12/14/02	12/27/02	12/05/02	12/17-20/02	12/05/02	12/13/02	12/11/02	12/16/02	12/18/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	2/05/02	12/09/02
04B024	12/02/02	12/18/02	12/13/02	12/14/02	12/27/02	12/05/02	12/17-20/02	12/05/02	12/30/02	12/11/02	12/16/02	12/16/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	2/05/02	12/09/02
05B018	12/02/02	12/18/02	12/13/02	12/14/02	12/27/02	12/05/02	12/17-20/02	12/05/02	12/30/02	12/11/02	12/16/02	12/18/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	2/05/02	12/09/02
05B019	12/02/02	12/18/02	12/13/02	12/14/02	12/27/02	12/05/02	12/17-20/02	12/05/02	12/30/02	12/11/02	12/16/02	12/12/02	12/12/02	12/13/02	12/05/02	12/09/02	10/16/02	2/05/02	12/09/02

<sup>1</sup> Note: Sample numbers were truncated by the reviewer in order to fit the column.

Data Qualifiers	
	U      The analyte was not detected at or above the reported numeric result.
	J      The analyte was positively identified. The associated numerical result is an estimate.
	UJ     The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
	R      The data are unusable for all purposes.
	N      There is evidence the analyte is present in this sample
	JN     There is evidence that the analyte is present. The associated numerical result is an estimate

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 1 of 2

Sample ID: LWG0107B023SDS015C00  
SAMPLE

Lab Sample ID: EW86A  
LIMS ID: 02-15273  
Matrix: Sediment  
Data Release Authorized: BB  
Reported: 01/03/03

Date Extracted: 12/02/02  
Date Analyzed: 12/12/02 19:20  
Instrument/Analyst: FINN8/PK  
GPC Cleanup: NO

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 26.3 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.9%  
pH: 7.2

CAS Number	Analyte	µg/kg
108-95-2	Phenol	38 U
111-44-4	Bis-(2-Chloroethyl) Ether	38 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	95 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	38 U
67-72-1	Hexachloroethane	38 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	95 U
105-67-9	2,4-Dimethylphenol	57 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	57 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	57 U ✓
87-68-3	Hexachlorobutadiene	38 U
59-50-7	4-Chloro-3-methylphenol	38 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	95 U
88-06-2	2,4,6-Trichlorophenol	95 U
95-95-4	2,4,5-Trichlorophenol	95 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	95 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	110 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	95 U
132-64-9	Dibenzofuran	19 U
606-20-2	2,6-Dinitrotoluene	95 U
121-14-2	2,4-Dinitrotoluene	95 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

for other SWAs use the  
SIM analytical results

FORM I

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1/15/03

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
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Sample ID: LWG0107B023SDS015C00  
SAMPLE

Lab Sample ID: EW86A  
LIMS ID: 02-15273  
Matrix: Sediment  
Date Analyzed: 12/12/02 19:20

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	µg/kg
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	95 U → use SIM
85-01-8	Phenanthrene	19 U
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U ✓ JN 8
84-74-2	Di-n-Butylphthalate	27 ✓ JN 8
206-44-0	Fluoranthene	26 ✓
129-00-0	Pyrene	29 ✓
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	95 U
56-55-3	Benzo(a)anthracene	19 U → use SIM
117-81-7	bis(2-Ethylhexyl)phthalate	69 ✓ JN 8
218-01-9	Chrysene	19 U → use SIM
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	95 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	95 U
4901-51-3	2,3,4,5-Tetrachlorophenol	95 U
58-90-2	2,3,4,6-Tetrachlorophenol	95 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	52.7%	2-Fluorobiphenyl	58.4%
d14-p-Terphenyl	64.0%	d4-1,2-Dichlorobenzene	49.2%
d5-Phenol	52.9%	2-Fluorophenol	50.5%
2,4,6-Tribromophenol	70.3%	d4-2-Chlorophenol	53.5%

12/15/02  
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ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0107B023SDS015C00  
SAMPLE

Lab Sample ID: EW86A

LIMS ID: 02-15273

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/10/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/17/02 21:19

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

Sample Amount: 26.3 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.9 %  
pH: 7.2

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	14
218-01-9	Chrysene	19
205-99-2	Benzo(b)fluoranthene	12
207-08-9	Benzo(k)fluoranthene	14
50-32-8	Benzo(a)pyrene	15
193-39-5	Indeno(1,2,3-cd)pyrene	13
53-70-3	Dibenz(a,h)anthracene	2.5 <i>M</i> ~
191-24-2	Benzo(g,h,i)perylene	16
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	22
67-72-1	Hexachloroethane	1.9 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.7%
d14-Dibenzo(a,h)anthracene	105%

*Use the data reported  
from this run.*

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ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0107B023SDS015C00  
DILUTION

Lab Sample ID: EW86A  
LIMS ID: 02-15273  
Matrix: Sediment  
Data Release Authorized: ✓  
Reported: 01/07/03

Date Extracted: 12/02/02  
Date Analyzed: 12/20/02 19:06  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 10.0  
Florisil: YES  
pH: 7.2  
Percent Moisture: 11.9%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	1.9 U
319-85-7	beta-BHC	1.9 U
319-86-8	delta-BHC	1.9 U
58-89-9	gamma-BHC (Lindane)	1.9 U
76-44-8	Heptachlor	1.9 U
309-00-2	Aldrin	1.9 U
1024-57-3	Heptachlor Epoxide	1.9 U
959-98-8	Endosulfan I	1.9 U
60-57-1	Dieldrin	3.9 U
72-55-9	4,4'-DDE	20 ✓
72-20-8	Endrin	3.9 U
33213-65-9	Endosulfan II	3.9 U
72-54-8	4,4'-DDD	24 ↙
1031-07-8	Endosulfan Sulfate	3.9 U
50-29-3	4,4'-DDT	46 ↙
72-43-5	Methoxychlor	19 U
53494-70-5	Endrin Ketone	3.9 U
7421-93-4	Endrin Aldehyde	3.9 U
5103-74-2	gamma Chlordane	1.9 U
5103-71-9	alpha Chlordane	1.9 U
8001-35-2	Toxaphene	190 U
118-74-1	Hexachlorobenzene	1.9 U
87-68-3	Hexachlorobutadiene	1.9 U
789-02-6	2,4'-DDT	15 ↙
3424-82-6	2,4'-DDE	3.9 U
53-19-0	2,4'-DDD	12 ↙ ✓
26880-48-8	oxy Chlordane	3.9 U
5103-73-1	cis-Nonachlor	3.9 U
39765-80-5	trans-Nonachlor	3.9 U
2385-85-5	Mirex	3.9 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	87.5%

use the concentrations  
from this run

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0107B023SDS015C00  
SAMPLE

Lab Sample ID: EW86A  
LIMS ID: 02-15273  
Matrix: Sediment  
Data Release Authorized: *BP*  
Reported: 01/07/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 14:36  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

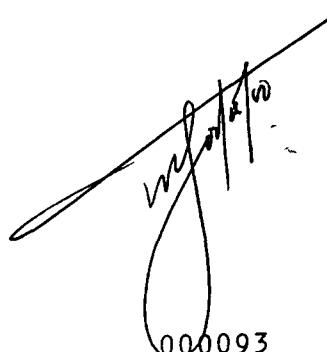
Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 7.2  
Percent Moisture: 11.9%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.37 <i>X</i> <i>U</i>
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	1.3 <i>X</i> <i>U</i>
72-55-9	4,4'-DDE	18 <i>B</i> <i>J</i>
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	21 <i>B</i> <i>J</i>
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	S
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.75 <i>X</i> <i>U</i>
5103-74-2	gamma Chlordane	0.44 <i>X</i>
5103-71-9	alpha Chlordane	0.56 <i>X</i>
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	✓ 0.19 U
87-68-3	Hexachlorobutadiene	✓ 0.32 <i>X</i> <i>U</i>
789-02-6	2,4'-DDT	16 <i>B</i> <i>J</i>
3424-82-6	2,4'-DDE	2.3 <i>X</i> <i>U</i>
53-19-0	2,4'-DDD	11 <i>B</i> <i>J</i>
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	71.5%
Tetrachloromethylene	85.2%

Use the dilution run  
values for detectedpests.



## ORGANICS ANALYSIS DATA SHEET

PSDDA PCB by GC/ECD

Page 1 of 1

Lab Sample ID: EW86A

LIMS ID: 02-15273

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/06/03

Date Extracted: 12/02/02

Date Analyzed: 12/26/02 18:26

Instrument/Analyst: ECD1/YZ

GPC Cleanup: YES

Sulfur Cleanup: YES

Acid Cleanup: YES

Max. Value of Dual Columns Reported

**ANALYTICAL  
RESOURCES  
INCORPORATED**


 Sample ID: LWG0107B023SDS015C00  
 SAMPLE

 QC Report No: EW86-Striplin Environmental Associate  
 Project: B01-01-34C

Date Sampled: 10/10/02

Date Received: 10/15/02

 Sample Amount: 25.9 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Florisil: NO  
 pH: 7.2  
 Percent Moisture: 11.9%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	23 <i>X</i> U
11096-82-5	Aroclor 1260	25 <i>X</i> U
11104-28-2	Aroclor 1221	7.7 U
11141-16-5	Aroclor 1232	3.9 U

**PCB Surrogate Recovery**

Decachlorobiphenyl	98.2%
Tetrachlorometaxylene	70.2%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0107B023SDS015C00

TOTAL METALS

Lab Sample ID: EW86A

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15273

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/10/02

Date Received: 10/15/02

Data Release Authorized

Reported: 12/30/02

Percent Total Solids: 85.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	10	10,100
3050B	12/05/02	7041	12/13/02	7440-36-0	✓ Antimony	0.2	0.3 ✓
3050B	12/05/02	7060A	12/11/02	7440-38-2	✓ Arsenic	0.1	0.7
3050B	12/05/02	7131A	12/16/02	7440-43-9	✓ Cadmium	0.05	0.09
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	1	/ 19 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.6	69.6
3050B	12/05/02	7421	12/16/02	7439-92-1	✓ Lead	1	15
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	3	21 J
3050B	12/05/02	7740	12/12/02	7782-49-2	✓ Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	✓ Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	2	97

U Analyte undetected at given RL

RL Reporting Limit

FORM-I

000114

**Final Report**  
**Laboratory Analysis of Conventional Parameters**

**Sample No: LWG0107B023SDS015C00**

Lab Sample ID: EW86A  
LIMS ID: 02-15273  
Matrix: Sediment

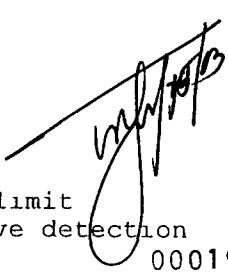
QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *WPF*  
Reported: 12/19/02

Date Sampled: 10/10/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B	0.01		Percent	85.5
Total Organic Carbon	12/04/02 12042#1	Plumb, 1981	0.0050		Percent	0.71

RL Analytical reporting limit  
 U Undetected at reported detection limit  
 B Analyte found in method blank above detection

  
 000197

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
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Lab Sample ID: EW86B  
LIMS ID: 02-15274  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/03/03

Date Extracted: 12/02/02  
Date Analyzed: 12/13/02 21:25  
Instrument/Analyst: FINN8/PK  
GPC Cleanup: NO

Sample ID: LWG0107B024SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 26.2 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 8.7%  
pH: 7.9

CAS Number	Analyte	µg/kg
108-95-2	Phenol	38 U
111-44-4	Bis-(2-Chloroethyl) Ether	38 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	95 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	38 U
67-72-1	Hexachloroethane	38 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	95 U
105-67-9	2,4-Dimethylphenol	57 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	57 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	57 U
87-68-3	Hexachlorobutadiene	38 U
59-50-7	4-Chloro-3-methylphenol	38 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	95 U
88-06-2	2,4,6-Trichlorophenol	95 U
95-95-4	2,4,5-Trichlorophenol	95 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	95 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	110 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	95 U
132-64-9	Dibenzofuran	19 U
606-20-2	2,6-Dinitrotoluene	95 U
121-14-2	2,4-Dinitrotoluene	95 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

→ use SIM

*[Handwritten signatures and initials over the bottom right corner]*  
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ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 2 of 2

Sample ID: LWG0107B024SDS015C00  
SAMPLE

Lab Sample ID: EW86B

LIMS ID: 02-15274

Matrix: Sediment

Date Analyzed: 12/13/02 21:25

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	95 U → use SIM
85-01-8	Phenanthrene	35 ✓
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	75 ✓
129-00-0	Pyrene	69 ✓
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	95 U
56-55-3	Benzo(a)anthracene	45 ✓
117-81-7	bis(2-Ethylhexyl)phthalate	59 JN ✓
218-01-9	Chrysene	56 ✓
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	62 ✓
207-08-9	Benzo(k)fluoranthene	52 ✓
50-32-8	Benzo(a)pyrene	53 ✓
193-39-5	Indeno(1,2,3-cd)pyrene	23 ✓
53-70-3	Dibenz(a,h)anthracene	19 U → use SIM
191-24-2	Benzo(g,h,i)perylene	19 U → use SIM
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	95 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	95 U
4901-51-3	2,3,4,5-Tetrachlorophenol	95 U
58-90-2	2,3,4,6-Tetrachlorophenol	95 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	75.6%	2-Fluorobiphenyl	93.0%
d14-p-Terphenyl	103%	d4-1,2-Dichlorobenzene	71.7%
d5-Phenol	80.8%	2-Fluorophenol	68.6%
2,4,6-Tribromophenol	130%	d4-2-Chlorophenol	82.2%

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0107B024SDS015C00  
**SAMPLE**

Lab Sample ID: EW86B

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

LIMS ID: 02-15274

Matrix: Sediment

Data Release Authorized: *[Signature]*

Date Sampled: 10/10/02

Reported: 01/06/03

Date Received: 10/15/02

Date Extracted: 12/02/02

Sample Amount: 26.2 g-dry-wt

Date Analyzed: 12/19/02 18:29

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 5.00

GPC Cleanup: NO

Percent Moisture: 8.7 %

pH: 7.9

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	9.5 U
56-55-3	Benzo(a)anthracene	32
218-01-9	Chrysene	38
205-99-2	Benzo(b)fluoranthene	30
207-08-9	Benzo(k)fluoranthene	29
50-32-8	Benzo(a)pyrene	36
193-39-5	Indeno(1,2,3-cd)pyrene	23
53-70-3	Dibenz(a,h)anthracene	9.5 U
191-24-2	Benzo(g,h,i)perylene	33
132-64-9	Dibenzofuran	9.5 U
87-86-5	Pentachlorophenol	48 U
67-72-1	Hexachloroethane	9.5 U

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	63.3%
d14-Dibenzo(a,h)anthracene	66.7%

000018

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1



Sample ID: LWG0107B024SDS015C00  
DILUTION

Lab Sample ID: EW86B  
LIMS ID: 02-15274

Matrix: Sediment

Data Release Authorized: *[Signature]*  
Reported: 01/07/03

Date Extracted: 12/02/02  
Date Analyzed: 12/13/02 20:29  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 26.2 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 50.0  
Florisil: YES  
pH: 7.9  
Percent Moisture: 8.7%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	9.5 U
319-85-7	beta-BHC	9.5 U
319-86-8	delta-BHC	9.5 U
58-89-9	gamma-BHC (Lindane)	9.5 U
76-44-8	Heptachlor	9.5 U
309-00-2	Aldrin	9.5 U
1024-57-3	Heptachlor Epoxide	9.5 U
959-98-8	Endosulfan I	9.5 U
60-57-1	Dieldrin	19 U
72-55-9	4,4'-DDE	78 ✓
72-20-8	Endrin	19 U
33213-65-9	Endosulfan II	19 U
72-54-8	4,4'-DDD	40 ✓
1031-07-8	Endosulfan Sulfate	19 U
50-29-3	4,4'-DDT	94 ✓
72-43-5	Methoxychlor	95 U
53494-70-5	Endrin Ketone	19 U
7421-93-4	Endrin Aldehyde	19 U
5103-74-2	gamma Chlordane	9.5 U
5103-71-9	alpha Chlordane	9.5 U
8001-35-2	Toxaphene	950 U
118-74-1	Hexachlorobenzene	9.5 U
87-68-3	Hexachlorobutadiene	9.5 U
789-02-6	2,4'-DDT	45 ✓
3424-82-6	2,4'-DDE	26 ✓
53-19-0	2,4'-DDD	89 ✓
26880-48-8	oxy Chlordane	19 U
5103-73-1	cis-Nonachlor	19 U
39765-80-5	trans-Nonachlor	19 U
2385-85-5	Mirex	19 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

Use the pesticide (detected)  
values from this run -

000098

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0107B024SDS015C00  
SAMPLE

Lab Sample ID: EW86B  
LIMS ID: 02-15274  
Matrix: Sediment  
Data Release Authorized: ✓  
Reported: 01/07/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 15:12  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

Sample Amount: 26.2 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 7.9  
Percent Moisture: 8.7%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.24 X u
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	1.3 X u
72-55-9	4,4'-DDE	S -
72-20-8	Endrin	0.38 U
33213-65-9	Endosulfan II	0.38 U
72-54-8	4,4'-DDD	26 X J
1031-07-8	Endosulfan Sulfate	0.38 U
50-29-3	4,4'-DDT	S
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	1.1 X u
7421-93-4	Endrin Aldehyde	1.2 X J
5103-74-2	gamma Chlordane	4.1 Y J
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	36 X u
118-74-1	Hexachlorobenzene	0.66 ✓
87-68-3	Hexachlorobutadiene	1.1 X u
789-02-6	2,4'-DDT	33 E J
3424-82-6	2,4'-DDE	15 E J
53-19-0	2,4'-DDD	S
26880-48-8	oxy Chlordane	0.50 X u
5103-73-1	cis-Nonachlor	1.3 X u
39765-80-5	trans-Nonachlor	0.38 U
2385-85-5	Mirex	0.38 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	93.5%
Tetrachlorometaxylene	88.5%

Use the concentrations  
reported for the dilution run  
for all detected pesticides  
except for hexachlorobenzene



## ORGANICS ANALYSIS DATA SHEET

PSDDA PCB by GC/ECD

Page 1 of 1

Lab Sample ID: EW86B

LIMS ID: 02-15274

Matrix: Sediment

Data Release Authorized: *JP*

Reported: 01/06/03

Date Extracted: 12/02/02

Date Analyzed: 12/26/02 18:54

Instrument/Analyst: ECD1/YZ

GPC Cleanup: YES

Sulfur Cleanup: YES

Acid Cleanup: YES

Max. Value of Dual Columns Reported

Sample ID: LWG0107B024SDS015C00  
SAMPLEQC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02

Date Received: 10/15/02

Sample Amount: 26.2 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 7.9  
Percent Moisture: 8.7%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.8 U
53469-21-9	Aroclor 1242	3.8 U
12672-29-6	Aroclor 1248	3.8 U
11097-69-1	Aroclor 1254	23 X U
11096-82-5	Aroclor 1260	46 X U
11104-28-2	Aroclor 1221	7.6 U
11141-16-5	Aroclor 1232	3.8 U

## PCB Surrogate Recovery

Decachlorobiphenyl	137%
Tetrachlorometaylene	120%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0107B024SDS015C00

TOTAL METALS

Lab Sample ID: EW86B

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15274

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/10/02

Date Received: 10/15/02

Data Release Authorized

Reported: 12/30/02

Percent Total Solids: 89.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/20/02	7429-90-5	Aluminum	10	15,400
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.2 U / R
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	1.6
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.05	0.07
3050B	12/05/02	6010B	12/20/02	7440-47-3	Chromium	1	20 J
3050B	12/05/02	6010B	12/20/02	7440-50-8	Copper	0.5	19.8
3050B	12/05/02	7421	12/16/02	7439-92-1	Lead	1	16
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.04	0.04 U
3050B	12/05/02	6010B	12/20/02	7440-02-0	Nickel	3	23 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/20/02	7440-66-6	Zinc	2	81

U Analyte undetected at given RL

RL Reporting Limit

**Final Report**  
**Laboratory Analysis of Conventional Parameters**

Sample No: LWG0107B024SDS015C00

Lab Sample ID: EW86B  
LIMS ID: 02-15274  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *AMF*  
Reported: 12/19/02

Date Sampled: 10/10/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	89.5
Total Organic Carbon	12/04/02 12042#1	Plumb, 1981		0.0050	Percent	0.54

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection limit  
000198

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86C

LIMS ID: 02-15275

Matrix: Sediment

Data Release Authorized: *BB*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 13:22

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0108B032SDS015C00

**SAMPLE**

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02

Date Received: 10/15/02

Sample Amount: 26.2 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 19.9%  
pH: 6.3

CAS Number	Analyte	µg/kg
108-95-2	Phenol	38 U
111-44-4	Bis-(2-Chloroethyl) Ether	38 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	95 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	38 U
67-72-1	Hexachloroethane	38 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	95 U
105-67-9	2,4-Dimethylphenol	57 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	57 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	57 U
87-68-3	Hexachlorobutadiene	38 U
59-50-7	4-Chloro-3-methylphenol	38 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	95 U
88-06-2	2,4,6-Trichlorophenol	95 U
95-95-4	2,4,5-Trichlorophenol	95 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	95 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	110 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	95 U
132-64-9	Dibenzofuran	19 U → use SIM
606-20-2	2,6-Dinitrotoluene	95 U
121-14-2	2,4-Dinitrotoluene	95 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	95 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 2 of 2

Sample ID: LWG0108B032SDS015C00  
SAMPLE

Lab Sample ID: EW86C  
LIMS ID: 02-15275  
Matrix: Sediment  
Date Analyzed: 12/13/02 13:22

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	µg/kg
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	95 U → use SIM
85-01-8	Phenanthrene	19 U
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	25 ✓
129-00-0	Pyrene	33 ✓
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	95 U
56-55-3	Benzo(a)anthracene	19 U
117-81-7	bis(2-Ethylhexyl)phthalate	45 ✓ JN 8
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	95 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	95 U
4901-51-3	2,3,4,5-Tetrachlorophenol	95 U
58-90-2	2,3,4,6-Tetrachlorophenol	95 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	70.5%
d14-p-Terphenyl	71.0%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	65.5%	2-Fluorophenol	61.8%
2,4,6-Tribromophenol	81.0%	d4-2-Chlorophenol	66.0%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0108B032SDS015C00  
SAMPLE

Lab Sample ID: EW86C

LIMS ID: 02-15275

Matrix: Sediment

Data Release Authorized:

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/17/02 21:44

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

Sample Amount: 26.2 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 19.9 %  
pH: 6.3

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-74-8	Carbazole	2.9
56-55-3	Benzo(a)anthracene	13
218-01-9	Chrysene	18
205-99-2	Benzo(b)fluoranthene	14
207-08-9	Benzo(k)fluoranthene	10
50-32-8	Benzo(a)pyrene	16
193-39-5	Indeno(1,2,3-cd)pyrene	13
53-70-3	Dibenz(a,h)anthracene	1.9 ✓ ↗
191-24-2	Benzo(g,h,i)perylene	18
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.5 U
67-72-1	Hexachloroethane	1.9 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	83.3%
d14-Dibenzo(a,h)anthracene	93.3%

000021

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0108B032SDS015C00  
SAMPLE

Lab Sample ID: EW86C  
LIMS ID: 02-15275  
Matrix: Sediment  
Data Release Authorized: *B*  
Reported: 01/07/03

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 08:10  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 25.7 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.3  
Percent Moisture: 19.9%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	0.39 U
1031-07-8	Endosulfan Sulfate	0.51 X 4
50-29-3	4,4'-DDT	1.1 X 4
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.60 X 4
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.76 Y
53-19-0	2,4'-DDD	0.39 U
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	76.8%



ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Sample ID: LWG0108B032SDS015C00  
SAMPLE

Lab Sample ID: EW86C  
LIMS ID: 02-15275  
Matrix: Sediment  
Data Release Authorized:   
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/26/02 20:19  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 25.7 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.3  
Percent Moisture: 19.9%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	6.9 ✓
11096-82-5	Aroclor 1260	9.9 J ✓
11104-28-2	Aroclor 1221	7.8 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	82.5%
Tetrachlorometaxylene	64.0%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0108B032SDS015C00

TOTAL METALS

Lab Sample ID: EW86C

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15275

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/10/02

Date Received: 10/15/02

Data Release Authorized:

Reported: 12/30/02

Percent Total Solids: 78.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	6	19,400
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.3	0.3 U ✓ RA
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	2.2
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.06	0.07
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	0.6	22.3 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.3	23.9
3050B	12/05/02	7421	12/16/02	7439-92-1	Lead	0.6	10.2
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.06	0.06 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	1	21 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	0.8	71.7

U Analyte undetected at given RL

RL Reporting Limit



**Final Report**  
**Laboratory Analysis of Conventional Parameters**

**Sample No: LWG0108B032SDS015C00**

Lab Sample ID: EW86C  
LIMS ID: 02-15275  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *AM*  
Reported: 12/19/02

Date Sampled: 10/10/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	77.3
Total Organic Carbon	12/04/02 12042#1	Plumb, 1981		0.0050	Percent	0.93

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection

*[Handwritten signature]*

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 1 of 2

Lab Sample ID: EW86D  
LIMS ID: 02-15276  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/03/03

Date Extracted: 12/02/02  
Date Analyzed: 12/13/02 14:11  
Instrument/Analyst: FINN8/PK  
GPC Cleanup: NO

Sample ID: LWG0109B024SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.0%  
pH: 5.9

CAS Number	Analyte	µg/kg
108-95-2	Phenol	39 U
111-44-4	Bis-(2-Chloroethyl) Ether	39 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	97 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	39 U
67-72-1	Hexachloroethane	39 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	97 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	39 U
59-50-7	4-Chloro-3-methylphenol	39 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	97 U
88-06-2	2,4,6-Trichlorophenol	97 U
95-95-4	2,4,5-Trichlorophenol	97 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	97 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	97 U
132-64-9	Dibenzofuran	19 U
606-20-2	2,6-Dinitrotoluene	97 U
121-14-2	2,4-Dinitrotoluene	97 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

*use sim*

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 2 of 2

Sample ID: LWG0109B024SDS015C00  
SAMPLE

Lab Sample ID: EW86D  
LIMS ID: 02-15276  
Matrix: Sediment  
Date Analyzed: 12/13/02 14:11

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	µg/kg
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	97 U → use SIM
85-01-8	Phenanthrene	32
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	33
129-00-0	Pyrene	46
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	97 U
56-55-3	Benzo(a)anthracene	19 U → use SIM
117-81-7	bis(2-Ethylhexyl)phthalate	49
218-01-9	Chrysene	21
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U ↑
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	97 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	97 U
4901-51-3	2,3,4,5-Tetrachlorophenol	97 U
58-90-2	2,3,4,6-Tetrachlorophenol	97 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	77.4%
d14-p-Terphenyl	85.0%	d4-1,2-Dichlorobenzene	63.9%
d5-Phenol	70.3%	2-Fluorophenol	67.7%
2,4,6-Tribromophenol	97.7%	d4-2-Chlorophenol	72.2%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0109B024SDS015C00  
SAMPLE

Lab Sample ID: EW86D

LIMS ID: 02-15276

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/17/02 22:10

Instrument/Analyst: NT4/PK

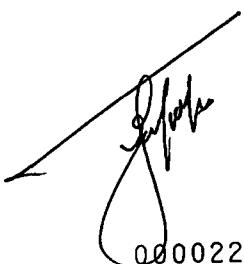
GPC Cleanup: NO

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 11.0 %  
pH: 5.9

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	18
218-01-9	Chrysene	19
205-99-2	Benzo(b)fluoranthene	9.7
207-08-9	Benzo(k)fluoranthene	10
50-32-8	Benzo(a)pyrene	14
193-39-5	Indeno(1,2,3-cd)pyrene	8.7
53-70-3	Dibenz(a,h)anthracene	2.5 X J
191-24-2	Benzo(g,h,i)perylene	14
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.7 U
67-72-1	Hexachloroethane	1.9 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 71.0%  
d14-Dibenzo(a,h)anthracene 103%



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ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0109B024SDS015C00  
SAMPLE

Lab Sample ID: EW86D

LIMS ID: 02-15276

Matrix: Sediment

Data Release Authorized: *✓*

Reported: 01/07/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/14/02 04:40

Instrument/Analyst: ECD4/JBG

GPC Cleanup: YES

Sulfur Cleanup: YES

Max. Value of Dual Columns Reported

Sample Amount: 26.6 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Florisil: YES

pH: 5.9

Percent Moisture: 11.0%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.38 U
72-55-9	4,4'-DDE	0.38 U
72-20-8	Endrin	0.38 U
33213-65-9	Endosulfan II	0.38 U
72-54-8	4,4'-DDD	0.39 X U
1031-07-8	Endosulfan Sulfate	0.38 U
50-29-3	4,4'-DDT	0.38 U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.38 U
7421-93-4	Endrin Aldehyde	0.38 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.22 X U
789-02-6	2,4'-DDT	0.38 U
3424-82-6	2,4'-DDE	0.51 X U
53-19-0	2,4'-DDD	0.38 U
26880-48-8	oxy Chlordane	0.38 U
5103-73-1	cis-Nonachlor	0.38 U
39765-80-5	trans-Nonachlor	0.38 U
2385-85-5	Mirex	0.38 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	76.0%
Tetrachlorometaxylene	77.5%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Lab Sample ID: EW86D  
LIMS ID: 02-15276  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/26/02 22:39  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

Sample ID: LWG0109B024SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Sample Amount: 26.6 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 5.9  
Percent Moisture: 11.0%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.8 U
53469-21-9	Aroclor 1242	3.8 U
12672-29-6	Aroclor 1248	3.8 U
11097-69-1	Aroclor 1254	5.6 ✓
11096-82-5	Aroclor 1260	3.5 J ✓
11104-28-2	Aroclor 1221	7.5 U
11141-16-5	Aroclor 1232	3.8 U

PCB Surrogate Recovery

Decachlorobiphenyl	87.8%
Tetrachlorometaxylene	61.0%

INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS

Sample No: LWG0109B024SDS015C00

Lab Sample ID: EW86D  
LIMS ID: 02-15276  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/10/02  
Date Received: 10/15/02

Data Release Authorized  
Reported: 12/30/02

Percent Total Solids: 89.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	5	15,300
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.20 ✓ R
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	1.1
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.04
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	0.5	15.7 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.2	18.2
3050B	12/05/02	7421	12/12/02	7439-92-1	Lead	0.3	4.7
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.04	0.04 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	1	19 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	0.6	55.0

U Analyte undetected at given RL

RL Reporting Limit

**Final Report**  
**Laboratory Analysis of Conventional Parameters**

Sample No: LWG0109B024SDS015C00

Lab Sample ID: EW86D  
LIMS ID: 02-15276  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *asap*  
Reported: 12/19/02

Date Sampled: 10/10/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B	0.01		Percent	89.6
Total Organic Carbon	12/04/02 12042#1	Plumb, 1981	0.0050		Percent	0.86

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection



ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86E

LIMS ID: 02-15277

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 14:59

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0109B026SDS015C00

SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/14/02

Date Received: 10/15/02

Sample Amount: 26.0 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.7%  
pH: 6.2

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
108-95-2	Phenol	38 U
111-44-4	Bis-(2-Chloroethyl) Ether	38 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	96 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	38 U
67-72-1	Hexachloroethane	38 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	96 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	38 U
59-50-7	4-Chloro-3-methylphenol	38 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	96 U
88-06-2	2,4,6-Trichlorophenol	96 U
95-95-4	2,4,5-Trichlorophenol	96 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	96 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	96 U
132-64-9	Dibenzofuran	19 U → see sim
606-20-2	2,6-Dinitrotoluene	96 U
121-14-2	2,4-Dinitrotoluene	96 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

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Sample ID: LWG0109B026SDS015C00  
SAMPLE

Lab Sample ID: EW86E

LIMS ID: 02-15277

Matrix: Sediment

Date Analyzed: 12/13/02 14:59

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U → use SIM
85-01-8	Phenanthrene	19 U
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	19 U
129-00-0	Pyrene	19 U
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	96 U
56-55-3	Benzo(a)anthracene	19 U → use SIM
117-81-7	bis(2-Ethylhexyl)phthalate	53 ✓ N-8
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	96 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	96 U
4901-51-3	2,3,4,5-Tetrachlorophenol	96 U
58-90-2	2,3,4,6-Tetrachlorophenol	96 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	75.1%	2-Fluorobiphenyl	86.5%
d14-p-Terphenyl	93.1%	d4-1,2-Dichlorobenzene	70.2%
d5-Phenol	74.5%	2-Fluorophenol	63.7%
2,4,6-Tribromophenol	94.3%	d4-2-Chlorophenol	73.1%

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0109B026SDS015C00  
**SAMPLE**

Lab Sample ID: EW86E

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

LIMS ID: 02-15277

Matrix: Sediment

Data Release Authorized: *[Signature]*

Date Sampled: 10/14/02

Reported: 01/06/03

Date Received: 10/15/02

Date Extracted: 12/02/02

Sample Amount: 26.0 g-dry-wt

Date Analyzed: 12/17/02 22:35

Final Extract Volume: 0.50 mL

Instrument/Analyst: NT4/PK

Dilution Factor: 1.00

GPC Cleanup: NO

Percent Moisture: 6.7 %

pH: 6.2

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	1.9 U
218-01-9	Chrysene	3.6
205-99-2	Benzo(b)fluoranthene	2.1
207-08-9	Benzo(k)fluoranthene	2.7
50-32-8	Benzo(a)pyrene	1.9 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.9 U
53-70-3	Dibenz(a,h)anthracene	1.9 U
191-24-2	Benzo(g,h,i)perylene	1.9 U
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.6 U
67-72-1	Hexachloroethane	1.9 U

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	77.3%
d14-Dibenzo(a,h)anthracene	136%

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ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED  


Sample ID: LWG0109B026SDS015C00  
SAMPLE

Lab Sample ID: EW86E  
LIMS ID: 02-15277  
Matrix: Sediment  
Data Release Authorized: *✓*  
Reported: 01/07/03

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 05:15  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/14/02  
Date Received: 10/15/02

Sample Amount: 25.7 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.2  
Percent Moisture: 6.7%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	0.39 U
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	0.39 U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.49 X U
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.39 U
53-19-0	2,4'-DDD	0.39 U
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	69.0%
Tetrachlorometaxylene	82.2%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0109B026SDS015C00  
SAMPLE

Lab Sample ID: EW86E  
LIMS ID: 02-15277  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/26/02 23:07  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/14/02  
Date Received: 10/15/02

Sample Amount: 25.7 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.2  
Percent Moisture: 6.7%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	3.9 U
11096-82-5	Aroclor 1260	3.9 U
11104-28-2	Aroclor 1221	7.8 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	63.8%

INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS

Sample No: LWG0109B026SDS015C00

Lab Sample ID: EW86E  
LIMS ID: 02-15277  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/14/02  
Date Received: 10/15/02

Data Release Authorized  
Reported: 12/30/02

Percent Total Solids: 91.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	5	11,300
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.2 U ✓ R
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	2.4
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.05
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	0.5	13.2 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.2	18.3
3050B	12/05/02	7421	12/16/02	7439-92-1	Lead	0.5	11.0
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	1	17 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	0.6	121

U Analyte undetected at given RL

RL Reporting Limit

**Final Report**  
**Laboratory Analysis of Conventional Parameters**

Sample No: LWG0109B026SDS015C00

Lab Sample ID: EW86E  
LIMS ID: 02-15277  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *AMF*  
Reported: 12/19/02

Date Sampled: 10/14/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	92.2
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	0.47

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86F

LIMS ID: 02-15278

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 15:50

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0103B030SDS015C00

SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.2%  
pH: 6.3

CAS Number	Analyte	µg/kg
108-95-2	Phenol	39 U
111-44-4	Bis-(2-Chloroethyl) Ether	39 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	97 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	39 U
67-72-1	Hexachloroethane	39 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	97 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	39 U
59-50-7	4-Chloro-3-methylphenol	39 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	97 U
88-06-2	2,4,6-Trichlorophenol	97 U
95-95-4	2,4,5-Trichlorophenol	97 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	97 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	97 U
132-64-9	Dibenzofuran	19 U → use SIM
606-20-2	2,6-Dinitrotoluene	97 U
121-14-2	2,4-Dinitrotoluene	97 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 2 of 2

Sample ID: LWG0103B030SDS015C00  
SAMPLE

Lab Sample ID: EW86F  
LIMS ID: 02-15278  
Matrix: Sediment  
Date Analyzed: 12/13/02 15:50

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	97 U → use SIM
85-01-8	Phenanthrene	19 U
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	19 U
129-00-0	Pyrene	19 U
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	97 U
56-55-3	Benzo(a)anthracene	19 U → use SIM
117-81-7	bis(2-Ethylhexyl)phthalate	61 UN
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	97 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	97 U
4901-51-3	2,3,4,5-Tetrachlorophenol	97 U
58-90-2	2,3,4,6-Tetrachlorophenol	97 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.0%	2-Fluorobiphenyl	84.3%
d14-p-Terphenyl	93.5%	d4-1,2-Dichlorobenzene	68.7%
d5-Phenol	73.0%	2-Fluorophenol	63.0%
2,4,6-Tribromophenol	92.7%	d4-2-Chlorophenol	72.0%

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0103B030SDS015C00  
**SAMPLE**

Lab Sample ID: EW86F

LIMS ID: 02-15278

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/11/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/20/02 18:44

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.2 %  
pH: 6.3

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	6.2 J
218-01-9	Chrysene	9.1 J
205-99-2	Benzo(b)fluoranthene	10 J
207-08-9	Benzo(k)fluoranthene	11 J
50-32-8	Benzo(a)pyrene	7.9 J
193-39-5	Indeno(1,2,3-cd)pyrene	16 J
53-70-3	Dibenz(a,h)anthracene	1.9 U
191-24-2	Benzo(g,h,i)perylene	23 J
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.7 U
67-72-1	Hexachloroethane	1.9 U

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	84.3%
d14-Dibenzo(a,h)anthracene	182%

000024

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

Lab Sample ID: EW86F  
LIMS ID: 02-15278  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/07/03

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 05:50  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

ANALYTICAL  
RESOURCES  
INCORPORATED  
Sample ID: LWG0103B030SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.3  
Percent Moisture: 9.2%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	0.39 U
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	0.39 U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.33 <i>X</i> U
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.39 U
53-19-0	2,4'-DDD	0.39 U
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	81.5%
Tetrachlorometaxylene	83.5%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Lab Sample ID: EW86F  
LIMS ID: 02-15278  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/26/02 23:35  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

Sample ID: LWG0103B030SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.3  
Percent Moisture: 9.2%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	3.9 U
11096-82-5	Aroclor 1260	3.9 U
11104-28-2	Aroclor 1221	7.7 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	87.8%
Tetrachlorometaxylene	65.5%

INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS

Sample No: LWG0103B030SDS015C00

Lab Sample ID: EW86F  
LIMS ID: 02-15278  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c  
Date Sampled: 10/11/02  
Date Received: 10/15/02

Data Release Authorized  
Reported: 12/30/02

Percent Total Solids: 87.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	5	11,900 ✓ R
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.2 U
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	1.9
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.04
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	0.5	14.8 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.2	14.4
3050B	12/05/02	7421	12/12/02	7439-92-1	Lead	0.3	6.9
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	1	16 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	0.6	56.2

U Analyte undetected at given RL

RL Reporting Limit

**Final Report**  
**Laboratory Analysis of Conventional Parameters**

Sample No: LWG0103B030SDS015C00

Lab Sample ID: EW86F  
LIMS ID: 02-15278  
Matrix: Sediment

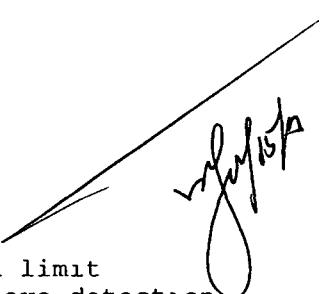
QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *awf*  
Reported: 12/19/02

Date Sampled: 10/11/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	89.4
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	0.13

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection



ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 1 of 2

Lab Sample ID: EW86G  
LIMS ID: 02-15279  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/03/03

Date Extracted: 12/02/02  
Date Analyzed: 12/13/02 16:34  
Instrument/Analyst: FINN8/PK  
GPC Cleanup. NO

Sample ID: LWG0103B031SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 26.0 g-dry-wt  
Final Extract Volume: 0.5 mL  
Dilution Factor: 1.00  
Percent Moisture: 24.5%  
pH: 6.5

CAS Number	Analyte	µg/kg
108-95-2	Phenol	38 U
111-44-4	Bis-(2-Chloroethyl) Ether	38 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	96 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	38 U
67-72-1	Hexachloroethane	38 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	96 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	38 U
59-50-7	4-Chloro-3-methylphenol	38 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	96 U
88-06-2	2,4,6-Trichlorophenol	96 U
95-95-4	2,4,5-Trichlorophenol	96 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	96 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	96 U
132-64-9	Dibenzofuran	19 U → use SIM
606-20-2	2,6-Dinitrotoluene	96 U
121-14-2	2,4-Dinitrotoluene	96 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

Lab Sample ID: EW86G  
LIMS ID: 02-15279  
Matrix: Sediment  
Date Analyzed: 12/13/02 16:34

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	µg/kg
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U → use SIM
85-01-8	Phenanthrene	26
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	56
129-00-0	Pyrene	83
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	96 U
56-55-3	Benzo(a)anthracene	38
117-81-7	bis(2-Ethylhexyl)phthalate	45 J/V
218-01-9	Chrysene	51
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	35
207-08-9	Benzo(k)fluoranthene	43
50-32-8	Benzo(a)pyrene	53
193-39-5	Indeno(1,2,3-cd)pyrene	47
53-70-3	Dibenz(a,h)anthracene	19 U → use SIM
191-24-2	Benzo(g,h,i)perylene	48
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	96 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	96 U
4901-51-3	2,3,4,5-Tetrachlorophenol	96 U
58-90-2	2,3,4,6-Tetrachlorophenol	96 U

#### Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	82.0%
d14-p-Terphenyl	91.8%	d4-1,2-Dichlorobenzene	64.5%
d5-Phenol	76.5%	2-Fluorophenol	73.4%
2,4,6-Tribromophenol	98.3%	d4-2-Chlorophenol	76.9%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0103B031SDS015C00  
SAMPLE

Lab Sample ID: EW86G

LIMS ID: 02-15279

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/17/02 23:25

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

Sample Amount: 26.0 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 24.5 %  
pH: 6.5

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	38
218-01-9	Chrysene	49
205-99-2	Benzo(b)fluoranthene	32
207-08-9	Benzo(k)fluoranthene	38
50-32-8	Benzo(a)pyrene	53
193-39-5	Indeno(1,2,3-cd)pyrene	46
53-70-3	Dibenz(a,h)anthracene	12 <del>M</del> J
191-24-2	Benzo(g,h,i)perylene	66
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.6 U
67-72-1	Hexachloroethane	1.9 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.3%
d14-Dibenzo(a,h)anthracene	113%

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ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED  


Sample ID: LWG0103B031SDS015C00  
SAMPLE

Lab Sample ID: EW86G  
LIMS ID: 02-15279  
Matrix: Sediment  
Data Release Authorized:   
Reported: 01/07/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 06:25  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.5  
Percent Moisture: 24.5%

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	0.39 U
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	0.39 U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.31 X U
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.86 X U
53-19-0	2,4'-DDD	0.42 X U
26880-48-8	oxy Chlordane	0.40 Y
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	77.2%
Tetrachlorometaxylene	78.8%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Sample ID: LWG0103B031SDS015C00  
SAMPLE

Lab Sample ID: EW86G  
LIMS ID: 02-15279  
Matrix: Sediment  
Data Release Authorized:   
Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.5  
Percent Moisture: 24.5%

Date Extracted: 12/02/02  
Date Analyzed: 12/27/02 00:03  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	8.0
11097-69-1	Aroclor 1254	3.9 U
11096-82-5	Aroclor 1260	3.9 U
11104-28-2	Aroclor 1221	7.8 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	80.5%
Tetrachlorometaxylene	58.8%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0103B031SDS015C00

TOTAL METALS

Lab Sample ID: EW86G

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15279

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/11/02

Date Received: 10/15/02

Data Release Authorized:

Reported: 12/30/02

Percent Total Solids: 75.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	20	22,100
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.3	0.3 U ✓ R
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	3.2
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.03	0.07
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	2	24 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.6	22.8
3050B	12/05/02	7421	12/16/02	7439-92-1	Lead	0.6	11.3
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	3	23 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.3	0.3 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.03	0.03 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	2	73

U Analyte undetected at given RL

RL Reporting Limit

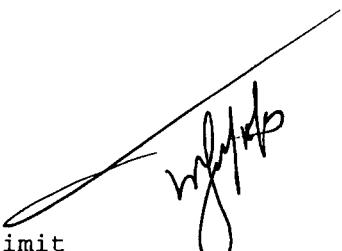
**Final Report**  
**Laboratory Analysis of Conventional Parameters**

Sample No: LWG0103B031SDS015C00

Lab Sample ID: EW86G                    QC Report No: EW86-Striplin Environmental Associate  
 LIMS ID: 02-15279                    Project: B01-01-34c  
 Matrix: Sediment  
 Date Sampled: 10/11/02  
 Data Release Authorized: *asf*                    Date Received: 10/15/02  
 Reported: 12/19/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B	0.01		Percent	76.7
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981	0.0050		Percent	0.31

RL      Analytical reporting limit  
 U      Undetected at reported detection limit  
 B      Analyte found in method blank above detection



ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86H

LIMS ID: 02-15280

Matrix: Sediment

Data Release Authorized:       

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 17:23

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0103B033SDS015C00

SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/14/02

Date Received: 10/15/02

Sample Amount: 25.9 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 6.7%

pH: 6.9

CAS Number	Analyte	µg/kg
108-95-2	Phenol	39 U
111-44-4	Bis-(2-Chloroethyl) Ether	39 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	96 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	39 U
67-72-1	Hexachloroethane	39 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	96 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	39 U
59-50-7	4-Chloro-3-methylphenol	39 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	96 U
88-06-2	2,4,6-Trichlorophenol	96 U
95-95-4	2,4,5-Trichlorophenol	96 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	96 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	96 U
132-64-9	Dibenzofuran	19 U → <i>des sim</i>
606-20-2	2,6-Dinitrotoluene	96 U
121-14-2	2,4-Dinitrotoluene	96 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 2 of 2

Sample ID: LWG0103B033SDS015C00

SAMPLE

Lab Sample ID: EW86H

LIMS ID: 02-15280

Matrix: Sediment

Date Analyzed: 12/13/02 17:23

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U → see SIM
85-01-8	Phenanthrene	19 U
86-74-8	Carbazole	19 U → see SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	19 U
129-00-0	Pyrene	19 U
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	96 U
56-55-3	Benzo(a)anthracene	19 U → see SIM
117-81-7	bis(2-Ethylhexyl)phthalate	46 UN
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	96 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	96 U
4901-51-3	2,3,4,5-Tetrachlorophenol	96 U
58-90-2	2,3,4,6-Tetrachlorophenol	96 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.4%	2-Fluorobiphenyl	85.6%
d14-p-Terphenyl	95.1%	d4-1,2-Dichlorobenzene	70.6%
d5-Phenol	76.8%	2-Fluorophenol	71.4%
2,4,6-Tribromophenol	95.8%	d4-2-Chlorophenol	75.4%

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0103B033SDS015C00  
**SAMPLE**

Lab Sample ID: EW86H

LIMS ID: 02-15280

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/14/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/17/02 23:50

Instrument/Analyst: NT4/PK

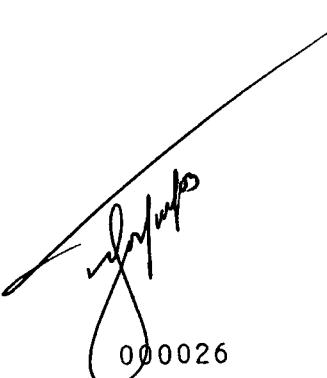
GPC Cleanup: NO

Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 6.7 %  
pH: 6.9

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	5.2
218-01-9	Chrysene	8.7
205-99-2	Benzo(b)fluoranthene	5.2
207-08-9	Benzo(k)fluoranthene	5.0
50-32-8	Benzo(a)pyrene	5.2
193-39-5	Indeno(1,2,3-cd)pyrene	6.4
53-70-3	Dibenz(a,h)anthracene	1.9 U
191-24-2	Benzo(g,h,i)perylene	8.9
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.7 U
67-72-1	Hexachloroethane	1.9 U

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	74.0%
d14-Dibenzo(a,h)anthracene	121%



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**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Pesticides/PCB by GC/ECD**  
 Page 1 of 1

**ANALYTICAL  
RESOURCES  
INCORPORATED**

Sample ID: LWG0103B033SDS015C00  
**SAMPLE**

Lab Sample ID: EW86H  
 LIMS ID: 02-15280  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 01/07/03

QC Report No: EW86-Striplin Environmental Associate  
 Project: B01-01-34c

Date Sampled: 10/14/02  
 Date Received: 10/15/02

Sample Amount: 25.8 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Florisil: YES  
 pH: 6.9  
 Percent Moisture: 6.7%

Date Extracted: 12/02/02  
 Date Analyzed: 12/14/02 13:26  
 Instrument/Analyst: ECD4/JBG  
 GPC Cleanup: YES  
 Sulfur Cleanup: YES  
 Max. Value of Dual Columns Reported

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieleadrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	0.39 U
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	0.39 U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.24 <i>X</i> U
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.39 U
53-19-0	2,4'-DDD	0.39 U
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

**Pesticide Surrogate Recovery**

Decachlorobiphenyl	79.8%
Tetrachlorometaxylene	78.2%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0103B033SDS015C00  
SAMPLE

Lab Sample ID: EW86H  
LIMS ID: 02-15280  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/14/02  
Date Received: 10/15/02

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.9  
Percent Moisture: 6.7%

Date Extracted: 12/02/02  
Date Analyzed: 12/27/02 00:31  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	3.9 U
11096-82-5	Aroclor 1260	3.9 U
11104-28-2	Aroclor 1221	7.8 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	59.8%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0103B033SDS015C00

TOTAL METALS

Lab Sample ID: EW86H

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15280

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/14/02

Date Received: 10/15/02

Data Release Authorized

Reported: 12/30/02

Percent Total Solids: 92.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	10	14,000
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.2 ✓R
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	4.0
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.06
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	1	15 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.5	15.8
3050B	12/05/02	7421	12/16/02	7439-92-1	Lead	0.5	12.8
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	3	18 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	2	62

U Analyte undetected at given RL

RL Reporting Limit

**Final Report  
Laboratory Analysis of Conventional Parameters**

**Sample No: LWG0103B033SDS015C00**

Lab Sample ID: EW86H  
LIMS ID: 02-15280  
Matrix: Sediment

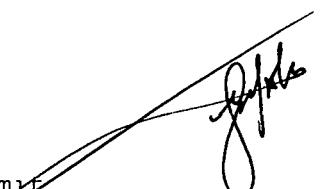
QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *pas*  
Reported: 12/19/02

Date Sampled: 10/14/02  
Date Received: 10/15/02

<u>Analyte</u>	<u>Analysis Date/Batch</u>	<u>Method</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Units</u>	<u>Result</u>
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	92.7
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	0.19 <sup>r</sup>

RL      Analytical reporting limit  
 U      Undetected at reported detection limit  
 B      Analyte found in method blank above detection



## ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86I

LIMS ID: 02-15281

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 19:00

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0104B023SDS015C00  
SAMPLEQC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 25.4 g-dry-wt  
 Final Extract Volume: 0.5 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 9.8%  
 pH: 6.5

CAS Number	Analyte	µg/kg
108-95-2	Phenol	39 U
111-44-4	Bis-(2-Chloroethyl) Ether	39 U
95-57-8	2-Chlorophenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	98 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	20 U
106-44-5	4-Methylphenol	20 U
621-64-7	N-Nitroso-Di-N-Propylamine	39 U
67-72-1	Hexachloroethane	39 U
98-95-3	Nitrobenzene	20 U
78-59-1	Isophorone	20 U
88-75-5	2-Nitrophenol	98 U
105-67-9	2,4-Dimethylphenol	59 U
65-85-0	Benzoic Acid	200 U
111-91-1	bis(2-Chloroethoxy) Methane	20 U
120-83-2	2,4-Dichlorophenol	59 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	Naphthalene	20 U
106-47-8	4-Chloroaniline	59 U
87-68-3	Hexachlorobutadiene	39 U
59-50-7	4-Chloro-3-methylphenol	39 U
91-57-6	2-Methylnaphthalene	20 U
77-47-4	Hexachlorocyclopentadiene	98 U
88-06-2	2,4,6-Trichlorophenol	98 U
95-95-4	2,4,5-Trichlorophenol	98 U
91-58-7	2-Chloronaphthalene	20 U
88-74-4	2-Nitroaniline	98 U
131-11-3	Dimethylphthalate	20 U
208-96-8	Acenaphthylene	20 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	20 U
51-28-5	2,4-Dinitrophenol	200 U
100-02-7	4-Nitrophenol	98 U
132-64-9	Dibenzofuran	20 U → use sim
606-20-2	2,6-Dinitrotoluene	98 U
121-14-2	2,4-Dinitrotoluene	98 U
84-66-2	Diethylphthalate	20 U
7005-72-3	4-Chlorophenyl-phenylether	20 U
86-73-7	Fluorene	20 U
100-01-6	4-Nitroaniline	98 U
534-52-1	4,6-Dinitro-2-Methylphenol	200 U

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 2 of 2

Sample ID: IWG0104B023SDS015C00  
SAMPLE

Lab Sample ID: EW86I

LIMS ID: 02-15281

Matrix: Sediment

Date Analyzed: 12/13/02 19:00

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	20 U
101-55-3	4-Bromophenyl-phenylether	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	98 U → see SIM
85-01-8	Phenanthrene	33
86-74-8	Carbazole	20 U → see SIM
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	Fluoranthene	57
129-00-0	Pyrene	71
85-68-7	Butylbenzylphthalate	20 U
91-94-1	3,3'-Dichlorobenzidine	98 U
56-55-3	Benzo(a)anthracene	26
117-81-7	bis(2-Ethylhexyl)phthalate	46 M 8
218-01-9	Chrysene	41
117-84-0	Di-n-Octyl phthalate	20 U
205-99-2	Benzo(b)fluoranthene	33
207-08-9	Benzo(k)fluoranthene	37
50-32-8	Benzo(a)pyrene	42
193-39-5	Indeno(1,2,3-cd)pyrene	38
53-70-3	Dibenz(a,h)anthracene	20 U → see SIM
191-24-2	Benzo(g,h,i)perylene	37
62-53-3	Aniline	20 U
62-75-9	N-Nitrosodimethylamine	98 U
103-33-3	Azobenzene	20 U
935-95-5	2,3,5,6-Tetrachlorophenol	98 U
4901-51-3	2,3,4,5-Tetrachlorophenol	98 U
58-90-2	2,3,4,6-Tetrachlorophenol	98 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	78.1%	2-Fluorobiphenyl	94.6%
d14-p-Terphenyl	101%	d4-1,2-Dichlorobenzene	75.0%
d5-Phenol	81.7%	2-Fluorophenol	78.9%
2,4,6-Tribromophenol	115%	d4-2-Chlorophenol	86.8%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0104B023SDS015C00  
SAMPLE

Lab Sample ID: EW86I  
LIMS ID: 02-15281  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/18/02 00:40  
Instrument/Analyst: NT4/PK  
GPC Cleanup: NO

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

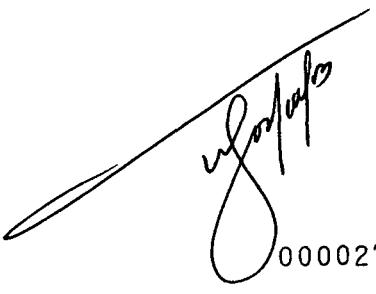
Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 25.4 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 9.8 %  
pH: 6.5

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	2.6
56-55-3	Benzo(a)anthracene	26
218-01-9	Chrysene	39
205-99-2	Benzo(b)fluoranthene	31
207-08-9	Benzo(k)fluoranthene	22
50-32-8	Benzo(a)pyrene	40
193-39-5	Indeno(1,2,3-cd)pyrene	46
53-70-3	Dibenz(a,h)anthracene	14 <i>M</i> ✓
191-24-2	Benzo(g,h,i)perylene	72
132-64-9	Dibenzofuran	2.0 U
87-86-5	Pentachlorophenol	9.8 U
67-72-1	Hexachloroethane	2.0 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	84.7%
d14-Dibenzo(a,h)anthracene	114%



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ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0104B023SDS015C00  
SAMPLE

Lab Sample ID: EW86I  
LIMS ID: 02-15281  
Matrix: Sediment  
Data Release Authorized: *YB*  
Reported: 01/08/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 14:01  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.5  
Percent Moisture: 9.8%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	1.8 ✓
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	0.75 ✓
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.31 ✓ U
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.90 ✓ U
53-19-0	2,4'-DDD	0.91 ✓
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	78.5%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0104B023SDS015C00  
SAMPLE

Lab Sample ID: EW86I  
LIMS ID: 02-15281  
Matrix: Sediment  
Data Release Authorized:   
Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Date Extracted: 12/02/02  
Date Analyzed: 12/27/02 00:59  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

Sample Amount: 25.8 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.5  
Percent Moisture: 9.8%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	3.9 U
11096-82-5	Aroclor 1260	3.4 J ✓
11104-28-2	Aroclor 1221	7.7 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	90.2%
Tetrachlorometaxylene	57.2%

INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS

Sample No: LWG0104B023SDS015C00

Lab Sample ID: EW86I  
LIMS ID: 02-15281  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C  
Date Sampled: 10/11/02  
Date Received: 10/15/02

Data Release Authorized  
Reported: 12/30/02

Percent Total Solids: 89.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	5	12,200
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.3 ✓
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	2.7
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.06
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	0.5	16.0 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.2	33.4
3050B	12/05/02	7421	12/18/02	7439-92-1	Lead	1	14
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.04	0.04 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	1	14 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	0.6	116

U Analyte undetected at given RL

RL Reporting Limit

**Final Report  
Laboratory Analysis of Conventional Parameters**

**Sample No: LWG0104B023SDS015C00**

Lab Sample ID: EW86I  
LIMS ID: 02-15281  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *qmp*  
Reported: 12/19/02

Date Sampled: 10/11/02  
Date Received: 10/15/02

<u>Analyte</u>	<u>Analysis Date/Batch</u>	<u>Method</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Units</u>	<u>Result</u>
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	90.4
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	0.28

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection

Report for EW86 received 10/15/02

000205

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86J

LIMS ID: 02-15282

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 19:48

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0104B024SDS015C00

SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 25.9 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 19.9%

pH: 6.4

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
108-95-2	Phenol	39 U
111-44-4	Bis-(2-Chloroethyl) Ether	39 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	96 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	39 U
67-72-1	Hexachloroethane	39 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	96 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	25
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	39 U
59-50-7	4-Chloro-3-methylphenol	39 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	96 U
88-06-2	2,4,6-Trichlorophenol	96 U
95-95-4	2,4,5-Trichlorophenol	96 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	96 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	51
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	96 U
132-64-9	Dibenzofuran	19 U → see sim
606-20-2	2,6-Dinitrotoluene	96 U
121-14-2	2,4-Dinitrotoluene	96 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	96 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 2 of 2

Sample ID: LWG0104B024SDS015C00  
SAMPLE

Lab Sample ID: EW86J  
LIMS ID: 02-15282  
Matrix: Sediment  
Date Analyzed: 12/13/02 19:48

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U → <i>use SIM</i>
85-01-8	Phenanthrene	320
86-74-8	Carbazole	19 U → <i>use SIM</i>
120-12-7	Anthracene	46
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	520
129-00-0	Pyrene	700
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	96 U
56-55-3	Benzo(a)anthracene	180
117-81-7	bis(2-Ethylhexyl)phthalate	65 <i>JN</i> 5
218-01-9	Chrysene	310
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	300
207-08-9	Benzo(k)fluoranthene	270
50-32-8	Benzo(a)pyrene	360
193-39-5	Indeno(1,2,3-cd)pyrene	220
53-70-3	Dibenz(a,h)anthracene	23
191-24-2	Benzo(g,h,i)perylene	220
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	96 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	96 U
4901-51-3	2,3,4,5-Tetrachlorophenol	96 U
58-90-2	2,3,4,6-Tetrachlorophenol	96 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	78.0%	2-Fluorobiphenyl	94.1%
d14-p-Terphenyl	101%	d4-1,2-Dichlorobenzene	74.2%
d5-Phenol	78.3%	2-Fluorophenol	77.1%
2,4,6-Tribromophenol	122%	d4-2-Chlorophenol	84.1%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Lab Sample ID: EW86K

LIMS ID: 02-15283

Matrix: Sediment

Data Release Authorized:       

Reported: 01/06/03

Date Extracted: 12/02/02

Date Analyzed: 12/18/02 01:55

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

Sample ID: LWG0105B018SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 26.6 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 13.9 %  
pH: 6.5

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	6.0
56-55-3	Benzo(a)anthracene	73
218-01-9	Chrysene	100
205-99-2	Benzo(b)fluoranthene	71J
207-08-9	Benzo(k)fluoranthene	63J
50-32-8	Benzo(a)pyrene	100J
193-39-5	Indeno(1,2,3-cd)pyrene	57J
53-70-3	Dibenz(a,h)anthracene	26 M J G
191-24-2	Benzo(g,h,i)perylene	71J
132-64-9	Dibenzofuran	3.2
87-86-5	Pentachlorophenol	9.4 U
67-72-1	Hexachloroethane	1.9 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	83.7%
d14-Dibenzo(a,h)anthracene	113%

Use this run for carbazole, dibenz(a,h)anthracene, dibenzofuran, pentachlorophenol - hexachloroethane only. The rest of the target analytes on this page, use the values reported off the SVOC run.

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ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

Lab Sample ID: EW86J

LIMS ID: 02-15282

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/08/03

Date Extracted: 12/02/02

Date Analyzed: 12/14/02 16:57

Instrument/Analyst: ECD4/JBG

GPC Cleanup: YES

Sulfur Cleanup: YES

Max. Value of Dual Columns Reported

Sample ID: LWG0104B024SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 26.3 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Florisil: YES

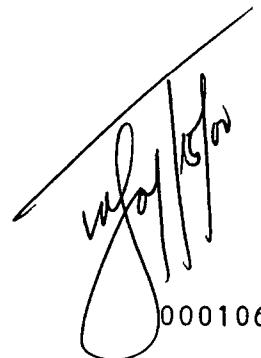
pH: 6.4

Percent Moisture: 19.9%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.22 X u
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.50 Y
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.38 U
72-55-9	4,4'-DDE	0.65 X u
72-20-8	Endrin	0.38 U
33213-65-9	Endosulfan II	0.38 U
72-54-8	4,4'-DDD	2.7 /
1031-07-8	Endosulfan Sulfate	0.38 U
50-29-3	4,4'-DDT	0.58 X u
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.38 U
7421-93-4	Endrin Aldehyde	0.45 X u
5103-74-2	gamma Chlordane	2.7 /
5103-71-9	alpha Chlordane	3.2 /
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.34 X u
789-02-6	2,4'-DDT	0.38 U
3424-82-6	2,4'-DDE	2.4 X u
53-19-0	2,4'-DDD	0.95 X u
26880-48-8	oxy Chlordane	0.38 U
5103-73-1	cis-Nonachlor	0.38 X u
39765-80-5	trans-Nonachlor	0.38 U
2385-85-5	Mirex	0.38 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	62.5%
Tetrachlorometaxylene	69.5%



000106

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

ANALYTICAL  
RESOURCES  
INCORPORATED

Sample ID: LWG0104B024SDS015C00  
SAMPLE

Lab Sample ID: EW86J  
LIMS ID: 02-15282  
Matrix: Sediment  
Data Release Authorized: *MB*  
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/27/02 01:27  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 26.3 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.4  
Percent Moisture: 19.9%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.8 U
53469-21-9	Aroclor 1242	3.8 U
12672-29-6	Aroclor 1248	6.0 X U
11097-69-1	Aroclor 1254	7.7 X U
11096-82-5	Aroclor 1260	3.8 U
11104-28-2	Aroclor 1221	7.6 U
11141-16-5	Aroclor 1232	3.8 U

PCB Surrogate Recovery

Decachlorobiphenyl	84.2%
Tetrachlorometaxylene	59.2%

INORGANICS ANALYSIS DATA SHEET  
TOTAL METALS

Sample No: LWG0104B024SDS015C00

Lab Sample ID: EW86J  
LIMS ID: 02-15282  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c  
Date Sampled: 10/11/02  
Date Received: 10/15/02

Data Release Authorized  
Reported: 12/30/02

Percent Total Solids: 78.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	20	21,100
3050B	12/05/02	7041	12/17/02	7440-36-0	Antimony	1	13 J
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	4.7
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.09
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	2	24 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.6	194
3050B	12/05/02	7421	12/16/02	7439-92-1	Lead	0.6	12.0
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	3	29 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	2	96

U Analyte undetected at given RL

RL Reporting Limit



**Final Report**  
**Laboratory Analysis of Conventional Parameters**

**Sample No: LWG0104B024SDS015C00**

Lab Sample ID: EW86J  
LIMS ID: 02-15282  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized:   
Reported: 12/19/02

Date Sampled: 10/11/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	77.5
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	1.4

RL      Analytical reporting limit  
U      Undetected at reported detection limit  
B      Analyte found in method blank above detection

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86K

LIMS ID: 02-15283

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 20:37

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0105B018SDS015C00

SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 26.6 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 13.9%

pH: 6.5

CAS Number	Analyte	µg/kg
108-95-2	Phenol	38 U
111-44-4	Bis-(2-Chloroethyl) Ether	38 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	94 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	38 U
67-72-1	Hexachloroethane	38 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	94 U
105-67-9	2,4-Dimethylphenol	56 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	56 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	56 U
87-68-3	Hexachlorobutadiene	38 U
59-50-7	4-Chloro-3-methylphenol	38 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	94 U
88-06-2	2,4,6-Trichlorophenol	94 U
95-95-4	2,4,5-Trichlorophenol	94 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	94 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	110 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	94 U
132-64-9	Dibenzofuran	19 U → use SIM
606-20-2	2,6-Dinitrotoluene	94 U
121-14-2	2,4-Dinitrotoluene	94 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	94 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 2 of 2

Sample ID: LWG0105B018SDS015C00  
SAMPLE

Lab Sample ID: EW86K

LIMS ID: 02-15283

Matrix: Sediment

Date Analyzed: 12/13/02 20:37

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	94 U → use sim
85-01-8	Phenanthrene	49
86-74-8	Carbazole	19 U → use sim
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	27 UN ✓
206-44-0	Fluoranthene	120
129-00-0	Pyrene	130
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	94 U
56-55-3	Benzo(a)anthracene	72
117-81-7	bis(2-Ethylhexyl)phthalate	230 UN ✓
218-01-9	Chrysene	97
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	100
207-08-9	Benzo(k)fluoranthene	81
50-32-8	Benzo(a)pyrene	86
193-39-5	Indeno(1,2,3-cd)pyrene	39
53-70-3	Dibenz(a,h)anthracene	19 U → use sim
191-24-2	Benzo(g,h,i)perylene	30
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	94 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	94 U
4901-51-3	2,3,4,5-Tetrachlorophenol	94 U
58-90-2	2,3,4,6-Tetrachlorophenol	94 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	80.0%	2-Fluorobiphenyl	93.6%
d14-p-Terphenyl	101%	d4-1,2-Dichlorobenzene	74.2%
d5-Phenol	82.7%	2-Fluorophenol	82.2%
2,4,6-Tribromophenol	123%	d4-2-Chlorophenol	86.1%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0104B024SDS015C00  
SAMPLE

Lab Sample ID: EW86J

LIMS ID: 02-15282

Matrix: Sediment

Data Release Authorized *[initials]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/11/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/18/02 01:05

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

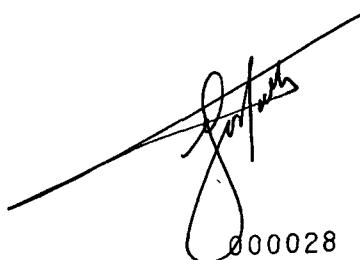
Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 19.9 %  
pH: 6.4

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-74-8	Carbazole	16
56-55-3	Benzo(a)anthracene	200 <i>E</i>
218-01-9	Chrysene	360 <i>E</i>
205-99-2	Benzo(b)fluoranthene	260 <i>E</i>
207-08-9	Benzo(k)fluoranthene	250 <i>E</i>
50-32-8	Benzo(a)pyrene	330 <i>E</i>
193-39-5	Indeno(1,2,3-cd)pyrene	180
53-70-3	Dibenz(a,h)anthracene	57 <i>H</i>
191-24-2	Benzo(g,h,i)perylene	380 <i>H</i>
132-64-9	Dibenzofuran	4.2
87-86-5	Pentachlorophenol	9.7 U
67-72-1	Hexachloroethane	1.9 U

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 82.0%  
d14-Dibenzo(a,h)anthracene 94.3%

Use this run for carbazole.  
dibenzofuran. PCP & hexachloroethane only



000028

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

Sample ID: LWG0105B018SDS015C00  
SAMPLE

Lab Sample ID: EW86K  
LIMS ID: 02-15283  
Matrix: Sediment  
Data Release Authorized: *✓*  
Reported: 01/08/03

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 17:32  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 26.1 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.5  
Percent Moisture: 13.9%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.26 X U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.40 X U
72-55-9	4,4'-DDE	0.44 X U
72-20-8	Endrin	0.38 U
33213-65-9	Endosulfan II	0.38 U
72-54-8	4,4'-DDD	0.38 U
1031-07-8	Endosulfan Sulfate	0.38 U
50-29-3	4,4'-DDT	1.4 X U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.38 U
7421-93-4	Endrin Aldehyde	0.38 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	25 X U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.37 X U
789-02-6	2,4'-DDT	0.38 U
3424-82-6	2,4'-DDE	1.2 X U
53-19-0	2,4'-DDD	0.38 U
26880-48-8	oxy Chlordane	0.38 U
5103-73-1	cis-Nonachlor	0.38 U
39765-80-5	trans-Nonachlor	0.38 U
2385-85-5	Mirex	0.38 U

#### Pesticide Surrogate Recovery

Decachlorobiphenyl	75.0%
Tetrachlorometaxylene	82.2%



000107

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Lab Sample ID: EW86K  
LIMS ID: 02-15283  
Matrix: Sediment  
Data Release Authorized: *BB*  
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/27/02 01:55  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

Sample ID: LWG0105B018SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 26.1 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.5  
Percent Moisture: 13.9%

CAS Number	Analyte	µg/kg
12674-11-2	Aroclor 1016	3.8 U
53469-21-9	Aroclor 1242	3.8 U
12672-29-6	Aroclor 1248	3.8 U
11097-69-1	Aroclor 1254	8.8 ✓
11096-82-5	Aroclor 1260	11 ✓
11104-28-2	Aroclor 1221	7.7 U
11141-16-5	Aroclor 1232	3.8 U

PCB Surrogate Recovery

Decachlorobiphenyl	95.8%
Tetrachlorometaxylene	63.5%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0105B018SDS015C00

TOTAL METALS

Lab Sample ID: EW86K

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15283

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/11/02

Date Received: 10/15/02

Data Release Authorized:

Reported: 12/30/02

Percent Total Solids: 86.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	10	18,800
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.2
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	2.4
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.02	0.09
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	1	28
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.6	108
3050B	12/05/02	7421	12/18/02	7439-92-1	Lead	3	62
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	3	23
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.2	0.2 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.02	0.02
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	2	81

U Analyte undetected at given RL

RL Reporting Limit

**Final Report**  
**Laboratory Analysis of Conventional Parameters**

Sample No: LWG0105B018SDS015C00

Lab Sample ID: EW86K  
LIMS ID: 02-15283  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: qaf  
Reported: 12/19/02

Date Sampled: 10/11/02  
Date Received: 10/15/02

Analyte	Analysis Date/Batch	Method	Dilution Factor	RL	Units	Result
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	86.6
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	1.1

RL Analytical reporting limit  
U Undetected at reported detection limit  
B Analyte found in method blank above detection

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 2

Lab Sample ID: EW86L

LIMS ID: 02-15284

Matrix: Sediment

Data Release Authorized *[Signature]*

Reported: 01/03/03

Date Extracted: 12/02/02

Date Analyzed: 12/13/02 18:11

Instrument/Analyst: FINN8/PK

GPC Cleanup: NO

Sample ID: LWG0105B019SDS015C00

SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02

Date Received: 10/15/02

Sample Amount: 25.9 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

Percent Moisture: 17.4%

pH: 6.7

CAS Number	Analyte	µg/kg
108-95-2	Phenol	39 U
111-44-4	Bis-(2-Chloroethyl) Ether	39 U
95-57-8	2-Chlorophenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	97 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	19 U
106-44-5	4-Methylphenol	19 U
621-64-7	N-Nitroso-Di-N-Propylamine	39 U
67-72-1	Hexachloroethane	39 U
98-95-3	Nitrobenzene	19 U
78-59-1	Isophorone	19 U
88-75-5	2-Nitrophenol	97 U
105-67-9	2,4-Dimethylphenol	58 U
65-85-0	Benzoic Acid	190 U
111-91-1	bis(2-Chloroethoxy) Methane	19 U
120-83-2	2,4-Dichlorophenol	58 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
106-47-8	4-Chloroaniline	58 U
87-68-3	Hexachlorobutadiene	39 U
59-50-7	4-Chloro-3-methylphenol	39 U
91-57-6	2-Methylnaphthalene	19 U
77-47-4	Hexachlorocyclopentadiene	97 U
88-06-2	2,4,6-Trichlorophenol	97 U
95-95-4	2,4,5-Trichlorophenol	97 U
91-58-7	2-Chloronaphthalene	19 U
88-74-4	2-Nitroaniline	97 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
99-09-2	3-Nitroaniline	120 U
83-32-9	Acenaphthene	19 U
51-28-5	2,4-Dinitrophenol	190 U
100-02-7	4-Nitrophenol	97 U
132-64-9	Dibenzofuran	19 U → use SIM
606-20-2	2,6-Dinitrotoluene	97 U
121-14-2	2,4-Dinitrotoluene	97 U
84-66-2	Diethylphthalate	19 U
7005-72-3	4-Chlorophenyl-phenylether	19 U
86-73-7	Fluorene	19 U
100-01-6	4-Nitroaniline	97 U
534-52-1	4,6-Dinitro-2-Methylphenol	190 U

ORGANICS ANALYSIS DATA SHEET  
Semivolatiles by GC/MS  
Page 2 of 2

Sample ID: LWG0105B019SDS015C00  
SAMPLE

Lab Sample ID: EW86L  
LIMS ID: 02-15284  
Matrix: Sediment  
Date Analyzed: 12/13/02 18:11

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
86-30-6	N-Nitrosodiphenylamine	19 U
101-55-3	4-Bromophenyl-phenylether	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	97 U → use SIM
85-01-8	Phenanthrene	19 U
86-74-8	Carbazole	19 U → use SIM
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	19 U
129-00-0	Pyrene	19 U
85-68-7	Butylbenzylphthalate	19 U
91-94-1	3,3'-Dichlorobenzidine	97 U
56-55-3	Benzo(a)anthracene	19 U → use SIM
117-81-7	bis(2-Ethylhexyl)phthalate	50 UN
218-01-9	Chrysene	19 U → use SIM
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U
62-53-3	Aniline	19 U
62-75-9	N-Nitrosodimethylamine	97 U
103-33-3	Azobenzene	19 U
935-95-5	2,3,5,6-Tetrachlorophenol	97 U
4901-51-3	2,3,4,5-Tetrachlorophenol	97 U
58-90-2	2,3,4,6-Tetrachlorophenol	97 U

#### Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	81.3%
d14-p-Terphenyl	92.2%	d4-1,2-Dichlorobenzene	69.0%
d5-Phenol	74.8%	2-Fluorophenol	67.3%
2,4,6-Tribromophenol	89.0%	d4-2-Chlorophenol	74.1%

**ORGANICS ANALYSIS DATA SHEET**

Semivolatiles by Selected Ion Monitoring GC/MS  
Page 1 of 1

Sample ID: LWG0105B019SDS015C00  
SAMPLE

Lab Sample ID: EW86L

LIMS ID: 02-15284

Matrix: Sediment

Data Release Authorized *[Signature]*

Reported: 01/06/03

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34C

Date Sampled: 10/11/02

Date Received: 10/15/02

Date Extracted: 12/02/02

Date Analyzed: 12/18/02 00:15

Instrument/Analyst: NT4/PK

GPC Cleanup: NO

Sample Amount: 25.9 g-dry-wt  
Final Extract Volume: 0.50 mL  
Dilution Factor: 1.00  
Percent Moisture: 17.4 %  
pH: 6.7

CAS Number	Analyte	µg/kg
86-74-8	Carbazole	1.9 U
56-55-3	Benzo(a)anthracene	6.4
218-01-9	Chrysene	7.9
205-99-2	Benzo(b)fluoranthene	7.3
207-08-9	Benzo(k)fluoranthene	7.5
50-32-8	Benzo(a)pyrene	4.2
193-39-5	Indeno(1,2,3-cd)pyrene	5.2
53-70-3	Dibenz(a,h)anthracene	1.9 U
191-24-2	Benzo(g,h,i)perylene	6.6
132-64-9	Dibenzofuran	1.9 U
87-86-5	Pentachlorophenol	9.7 U
67-72-1	Hexachloroethane	1.9 U

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	73.3%
d14-Dibenzo(a,h)anthracene	125%

ORGANICS ANALYSIS DATA SHEET  
PSDDA Pesticides/PCB by GC/ECD  
Page 1 of 1

Sample ID: LWG0105B019SDS015C00  
SAMPLE

Lab Sample ID: EW86L  
LIMS ID: 02-15284  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 01/08/03

Date Extracted: 12/02/02  
Date Analyzed: 12/14/02 07:00  
Instrument/Analyst: ECD4/JBG  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Max. Value of Dual Columns Reported

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 26.0 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: YES  
pH: 6.7  
Percent Moisture: 17.4%

CAS Number	Analyte	µg/kg
319-84-6	alpha-BHC	0.19 U
319-85-7	beta-BHC	0.19 U
319-86-8	delta-BHC	0.19 U
58-89-9	gamma-BHC (Lindane)	0.19 U
76-44-8	Heptachlor	0.19 U
309-00-2	Aldrin	0.19 U
1024-57-3	Heptachlor Epoxide	0.19 U
959-98-8	Endosulfan I	0.19 U
60-57-1	Dieldrin	0.39 U
72-55-9	4,4'-DDE	0.39 U
72-20-8	Endrin	0.39 U
33213-65-9	Endosulfan II	0.39 U
72-54-8	4,4'-DDD	0.39 U
1031-07-8	Endosulfan Sulfate	0.39 U
50-29-3	4,4'-DDT	0.39 U
72-43-5	Methoxychlor	1.9 U
53494-70-5	Endrin Ketone	0.39 U
7421-93-4	Endrin Aldehyde	0.39 U
5103-74-2	gamma Chlordane	0.19 U
5103-71-9	alpha Chlordane	0.19 U
8001-35-2	Toxaphene	19 U
118-74-1	Hexachlorobenzene	0.19 U
87-68-3	Hexachlorobutadiene	0.47 <i>X</i> U
789-02-6	2,4'-DDT	0.39 U
3424-82-6	2,4'-DDE	0.39 U
53-19-0	2,4'-DDD	0.39 U
26880-48-8	oxy Chlordane	0.39 U
5103-73-1	cis-Nonachlor	0.39 U
39765-80-5	trans-Nonachlor	0.39 U
2385-85-5	Mirex	0.39 U

Pesticide Surrogate Recovery

Decachlorobiphenyl	79.0%
Tetrachlorometaxylene	77.5%

*[Handwritten Signature]*  
000108

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Lab Sample ID: EW86L  
LIMS ID: 02-15284  
Matrix: Sediment  
Data Release Authorized:   
Reported: 01/06/03

Date Extracted: 12/02/02  
Date Analyzed: 12/27/02 07:04  
Instrument/Analyst: ECD1/YZ  
GPC Cleanup: YES  
Sulfur Cleanup: YES  
Acid Cleanup: YES  
Max. Value of Dual Columns Reported

Sample ID: LWG0105B019SDS015C00  
SAMPLE

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Date Sampled: 10/11/02  
Date Received: 10/15/02

Sample Amount: 26.0 g-dry-wt  
Final Extract Volume: 1.0 mL  
Dilution Factor: 1.00  
Florisil: NO  
pH: 6.7  
Percent Moisture: 17.4%

CAS Number	Analyte	$\mu\text{g}/\text{kg}$
12674-11-2	Aroclor 1016	3.9 U
53469-21-9	Aroclor 1242	3.9 U
12672-29-6	Aroclor 1248	3.9 U
11097-69-1	Aroclor 1254	3.9 U
11096-82-5	Aroclor 1260	3.9 U
11104-28-2	Aroclor 1221	7.7 U
11141-16-5	Aroclor 1232	3.9 U

PCB Surrogate Recovery

Decachlorobiphenyl	87.0%
Tetrachlorometaxylene	62.2%

INORGANICS ANALYSIS DATA SHEET

Sample No: LWG0105B019SDS015C00

TOTAL METALS

Lab Sample ID: EW86L

QC Report No: EW86-Striplin Environmental Associate

LIMS ID: 02-15284

Project: B01-01-34c

Matrix: Sediment

Date Sampled: 10/11/02

Date Received: 10/15/02

Data Release Authorized

Reported: 12/30/02

Percent Total Solids: 76.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050B	12/05/02	6010B	12/17/02	7429-90-5	Aluminum	20	10,500
3050B	12/05/02	7041	12/13/02	7440-36-0	Antimony	0.2	0.2 U R
3050B	12/05/02	7060A	12/11/02	7440-38-2	Arsenic	0.3	2.6
3050B	12/05/02	7131A	12/16/02	7440-43-9	Cadmium	0.03	0.03
3050B	12/05/02	6010B	12/17/02	7440-47-3	Chromium	2	13 J
3050B	12/05/02	6010B	12/17/02	7440-50-8	Copper	0.6	24.2
3050B	12/05/02	7421	12/12/02	7439-92-1	Lead	0.3	5.6
CLP	12/05/02	7471A	12/09/02	7439-97-6	Mercury	0.05	0.05 U
3050B	12/05/02	6010B	12/17/02	7440-02-0	Nickel	3	14 J
3050B	12/05/02	7740	12/12/02	7782-49-2	Selenium	0.3	0.3 U
3050B	12/05/02	7761	12/13/02	7440-22-4	Silver	0.03	0.03 U
3050B	12/05/02	6010B	12/17/02	7440-66-6	Zinc	2	105

U Analyte undetected at given RL

RL Reporting Limit



**Final Report**  
**Laboratory Analysis of Conventional Parameters**

**Sample No: LWG0105B019SDS015C00**

Lab Sample ID: EW86L  
LIMS ID: 02-15284  
Matrix: Sediment

QC Report No: EW86-Striplin Environmental Associate  
Project: B01-01-34c

Data Release Authorized: *gmp*  
Reported: 12/19/02

Date Sampled: 10/11/02  
Date Received: 10/15/02

<u>Analyte</u>	<u>Analysis Date/Batch</u>	<u>Method</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Units</u>	<u>Result</u>
Total Solids	10/16/02 10162#1	EPA 160.3 SM 2540 B		0.01	Percent	77.2
Total Organic Carbon	12/05/02 12052#1	Plumb, 1981		0.0050	Percent	0.10

RL      Analytical reporting limit  
U      Undetected at reported detection limit  
B      Analyte found in method blank above detection

Analytical Resources Inc  
B01-01-34

Apparent Grain Size Distribution Summary  
Percent Finer Than Indicated Size

Sample No	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
	-3	-2	-1						5	6	7	8	9	10
Phi Size	3	2	1	0	1	2	3	4						
Sieve Size (microns)	3/8"	#4	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (62)	31 00	15 60	7 80	3 90	2.00	1 00
02-15274-EW86B-A	96 67	92 94	89 91	87 58	72 29	16 99	2 46	1 39	0 65	0 43	0 29	0 16	0 16	0 12
02-15274-EW86B-B	98 98	96 83	94 27	91 96	75 80	17 23	2 19	1 21	0 68	0 48	0 41	0 22	0 15	0 14
02-15274-EW86B-C	91 62	86 15	82 38	80 25	65 82	13 78	0 46	0 10	0 56	0 40	0 31	0 18	0 18	0 12
02-15273-EW86A	98 28	95 00	87 94	73 86	54 75	24 76	7 26	3 53	2 35	1 77	1 28	0 88	0 49	0 34
02-15275-EW86C	100 00	92 71	87 70	84 86	70 97	39 21	22 66	18 83	14 08	10 81	8 01	5 85	4 14	2 91
02-15276-EW86D	100 00	99 42	98 36	96 37	70 06	18 64	10 44	6 73	2 87	1 69	1 22	0 82	0 55	0 31
02-15277-EW86E	94 93	91 83	87 29	84 89	71 19	7 57	0 38	0 08	0 33	0 23	0 17	0 13	0 09	0 06
02-15278-EW86F	100 00	99 77	98 93	97 41	77 96	7 97	1 00	0 81	0 14	0 12	0 10	0 06	0 04	0 04
02-15279-EW86G	100 00	100 00	99 82	99 42	95 25	66 90	25 19	14 68	9 52	6 40	4 44	3 10	2 28	1 58
02-15280-EW86H	100 00	100 00	99 24	98 03	83 35	18 05	5 42	3 61	1 52	0 69	0 39	0 23	0 16	0 12
02-15281-EW86I	100 00	96 18	87 27	78 47	59 32	9 99	1 22	0 28	1 48	0 91	0 55	0 35	0 21	0 18
02-15282-EW86J	98 68	94 87	89 48	83 87	68 07	29 26	4 45	1 15	0 82	0 56	0 33	0 18	0 14	0 10
02-15283-EW86K	98 43	90 70	81 21	74 02	57 27	35 46	17 36	12 25	7 50	5 14	3 71	2 61	1 92	1 34
02-15284-EW86L	100 00	99 80	99 53	99 00	86 07	7 64	0 57	0 52	0 00	0 02	0 02	0 00	0 01	0 01

## Notes to the Testing

- 1 Apparent grain size distributions according to PSEP protocols

1000-647

Analytical Resources Inc  
B01-01-34

Apparent Grain Size Distribution Summary  
Percent Retained in Each Size Fraction

Sample No	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay		
Phi Size	> -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	< 10
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31.0	31.0-15.6	15.6-7.8	7.8-3.9	3.9-2.0	2.0-1.0	<1.0
02-15274-EW86B-A	10.09	2.33	15.29	55.29	14.53	1.07	0.75	0.21	0.14	0.13	0.00	0.04	0.12
02-15274-EW86B-B	5.73	2.32	16.16	58.56	15.04	0.98	0.52	0.20	0.07	0.19	0.07	0.01	0.14
02-15274-EW86B-C	17.62	2.13	14.43	52.04	13.32	0.36	-0.46	0.16	0.09	0.13	0.01	0.06	0.12
02-15273-EW86A	12.06	14.08	19.11	29.99	17.50	3.73	1.18	0.58	0.49	0.40	0.40	0.14	0.34
02-15275-EW86C	12.30	2.84	13.89	31.76	16.55	3.82	4.76	3.27	2.80	2.16	1.70	1.23	2.91
02-15276-EW86D	1.64	1.99	26.32	51.42	8.20	3.71	3.86	1.17	0.47	0.40	0.26	0.24	0.31
02-15277-EW86E	12.71	2.39	13.70	63.62	7.20	0.29	-0.25	0.10	0.06	0.05	0.04	0.02	0.06
02-15278-EW86F	1.07	1.53	19.45	69.99	6.97	0.19	0.67	0.02	0.03	0.04	0.02	0.00	0.04
02-15279-EW86G	0.18	0.40	4.18	28.34	41.71	10.51	5.17	3.12	1.96	1.34	0.82	0.70	1.58
02-15280-EW86H	0.76	1.21	14.68	65.30	12.63	1.81	2.09	0.83	0.31	0.15	0.07	0.05	0.12
02-15281-EW86I	12.73	8.81	19.15	49.33	8.77	0.94	-1.20	0.57	0.36	0.20	0.14	0.03	0.18
02-15282-EW86J	10.52	5.60	15.80	38.81	24.81	3.30	0.32	0.27	0.23	0.15	0.05	0.04	0.10
02-15283-EW86K	18.79	7.19	16.75	21.81	18.11	5.11	4.75	2.36	1.44	1.10	0.68	0.59	1.34
02-15284-EW86L	0.47	0.53	12.93	78.43	7.06	0.05	0.52	-0.02	0.00	0.02	-0.01	0.00	0.01

## Notes to the Testing

1. Apparent grain size distributions according to PSEP protocols

1000-647

# VARIAN 1 GFA SAMPLE RUN LOG

Element: As

Analysis Date: 12-13-02

Analyst: JH

RL ( $\mu\text{g/L}$ ): 0.2

Page: 1 of 5

All corrections made by analyst unless otherwise noted.

JH 12-13-02

Edit Label	Load Data	ARI Sample ID	Prep. Code	Dilution Factor	Calculated Value ( $\mu\text{g/L}$ )	Instrument Spike ( $\mu\text{g/L}$ )	Instrument Spike %R or MSA r	Comments
		SrO O						1897-12 188-
		1.0						
		2.0						
		\$5.0						1896-7
		ICW			2.99			99.6% ✓ 1897-9
		ICB			0.03			—
		CnA			0.44	2.42	99.0	—
		IDL1			0.60			
		2			0.60			
		3			0.64			$\bar{x} = 0.644$
		4			0.65			SD 0.0244
		5			0.64			
		6			0.66			
		7			0.64			
		CCr1			3.08			102.8% ✓
		CCr3			-0.02			✓
		AvR						
		SO						
		CCr2	(SD)		1.60	(SD)		56.1% Below
		CCr2	SO					
		CCr3			3.06			101.9%
		CCr3			-0.04			✓

Modifier: MS015 Cuvette: uSed Platform: uSed Boost mA: — 001922

# VARIAN 1 GFA SAMPLE RUN LOG

Element: Ag  
RL ( $\mu\text{g/L}$ ): 0.2

Analysis Date: 12-13-02

Analyst: H  
Page: 2 of 5

All corrections made by analyst unless otherwise noted.

12-13-02

Edit Label	Load Data	ARI Sample ID	Prep. Code	Dilution Factor	Calculated Value ( $\mu\text{g/L}$ )	Instrument Spike ( $\mu\text{g/L}$ )	Instrument Spike %R or MSA r	Comments
		EAT9106		200	2.60	4.35	87.5%	106.6%
		MB MS	Suu	2	u.	19.9	99.5	
		1		1000	2.73	4.70	98.5	136.5 mg/kg ✓
		2		1	2.63	4.59	98.0	130.8 mg/kg ✓
		3		1	2.81	4.81	100.0	140.5 mg/kg ✓
		CCV4			3.20			106.7% ✓
		CCB43			-005			
	SD				RESET SPK LEVEL AC			
		CCV5			3.26			108.8% ✓
		CCB54			0.02			
		EWS6MB1	Suu	2	u	2.06	103.0	Rerun C1 out
		Ref1		500	1.03	2.99	98.5	25.8 mg/kg low - Rerun
		MB1spk		20	2.22	4.08	93.1	111.9% ✓
		Mbzspk		1	2.28	4.16	94.2	114.9% ✓
		A		2	u	1.92	96.0	
		CCV6			3.54			118.1% hi
	SD							
	SZD							140.3% ✓
		CCV7			3.81			103.0% ✓
		CCB65			0.00			✓
	✓	EWS6MB1	Suu	2	u	1.94	97.0%	106.6%
	✓	Ref1		500	0.91	2.16	92.7	22.75 mg/kg lo
				1000				Cdr

Modifier: — Cuvette: — Platform: — Boost mA: — 001923

# VARIAN 1 GFA SAMPLE RUN LOG

Element: Ag

Analysis Date: 12-18-02

Analyst: AT

RL ( $\mu\text{g/L}$ ): 0.2

Page: 3 of 5

All corrections made by analyst unless otherwise noted.

+ 12-16-02

Edit Label	Load Data	ARI Sample ID	Prep. Code	Dilution Factor	Calculated Value ( $\mu\text{g/L}$ )	Instrument Spike ( $\mu\text{g/L}$ )	Instrument Spike %R or MSA r	Comments
✓	EWS66MB130	Swn	20	2.13	3.85	85.7	106.5%	-
✓	M8spk		4	2.13	3.92	89.4	106.5%	-
✓	A		2	u	1.69	84.5	-	-
	CCW8				3.17		105.6%	-
	CCB86				0.00		-	-
✓	EWS66B	Swn	12	u	1.69	84.5	-	-
✓	Blue		4	u	1.68	84.0	-	-
✓	Bspk		20	1.77	3.65	94.3	88.5%	-
✓	C		2	u	1.71	85.5	-	-
✓	D		4	u	1.68	84.0	-	-
	CCW9				3.17		105.6%	✓
	CCB87				0.00		-	-
✓	EWS66E	Swn	2	u	1.73	88.0	116.0%	-
✓	F			u	1.68	84.0	-	-
✓	G			u	1.87	93.5	-	-
✓	H			u	1.75	87.5	-	-
✓	I		4	u	1.79	89.5	-	-
	CCW10				2.79		99.8%	-
	CCB88				-0.01		-	-
✓	EWS66J	Swn	2	u	1.64	82.0	82.0	-
✓	K			u	1.82	91.0	80.0	-
✓	L		4	u	1.73	86.5	-	-

Modifier: ✓ Cuvette: → Platform: — Boost mA: 001924

# VARIAN 1 GFA SAMPLE RUN LOG

Element: Ag  
RL ( $\mu\text{g/L}$ ): 0.2

Analysis Date: 12-13-02

Analyst: M

Page: 4 of 5

All corrections made by analyst unless otherwise noted.

At 12-16-02

Edit Label	Load Data	ARI Sample ID	Prep. Code	Dilution Factor	Calculated Value ( $\mu\text{g/L}$ )	Instrument Spike ( $\mu\text{g/L}$ )	Instrument Spike %R or MSA r	Comments
✓	E0091 MBZ	Sewn	2	u	1.91	95.5		
✓	→ Ref 2	b	500	1.92	3.72	86.9	49.5 mg/kg ✓	
	CCV11				2.97		98.7%	
	CCB 529				0.00			
✓	E0091 MBZ spike	Sewn	20	1.90	3.69	89.6	95% ✓	
✓	m83pk	i	4	1.90	3.69	89.5	95% ✓	
✓	A		2	u	1.71	85.5		
✓	ADup		↓	u	1.72	86.0		✓
✓	↑ Aspl	↑	20	1.60	3.32	86.0	80% ✓	
	CCV12				2.94		98.5% ✓	
	CCB 510				-0.00			✓
✓	B0091 B	Sewn	2	u	1.80	90.0		
✓	C			u	1.68	84.0		
✓	D			0.20	1.76	77.7		
✓	E			u	1.77	88.5		
✓	↑ F	↑	↓	u	1.58	77.0		
	CCV13				2.99		99.8% ✓	
	CCB 5211				0.02			✓
✓	E0091 G	Sewn	2	u	1.65	82.5		
✓	H			u	1.71	85.5		
	I				1.84	3.49	82.3	5X
✓	↑ KJ	↑	↓	u	1.78	87.8		7A 16263

Modifier: — Cuvette: — Platform: — Boost mA: — 001925

### Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 12/13/02

Ag VI	Analyst 12/16/02	Peer BW 17/16	Comment
<b>Logbook:</b>			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
<b>Calibration:</b>			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
<b>Calibration Verification:</b>			
ICV/CCV	✓	✓	SEE LOG
ICB/CCB	✓	✓	
<b>Samples:</b>			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
<b>Method QC:</b>			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	✓	✓	SEE LOG
<b>Matrix QC:</b>			
SRM/LCS	✓	✓	SEE LOG EWG
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	—	
<b>Data Distribution:</b>			
Requested elements/isotope identified	—	—	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	—	✓	
<b>Necessary Analysts Notes and CAF's</b>	✓	✓	CAF BWG

Varian SpectraA 300/400 Zeeman  
QC Protocol Report

1  
12/16/02

ANALYTICAL RESOURCES INC.  
VARIAN 1 300

OPERATOR ALA  
DATE 12/13/2002  
BATCH Ag021213

QC PROTOCOL PARAMETERS

QC STANDARD POSITION 45  
IF THERE IS AN ERROR RESLOPE AND REPEAT  
QC SPIKE POSITION 44  
RECOVERY LIMITS (%) 85 TO 115  
RECOVERY MINIMUM LIMIT (%) 40  
CORRELATION COEFFICIENT (*r*) 0.995  
OVERRANGE VOLUME REDUCTION 1  
REPLICATE RSD LIMIT (%) 100.0

(CLASSIFIED)  
BY 12-16-02  
xx

PROGRAM 4 Ag IDL

INSTRUMENT MODE ABSORBANCE  
CALIBRATION MODE CONCENTRATION  
MEASUREMENT MODE PEAK AREA  
LAMP POSITION 2  
LAMP CURRENT (mA) 4  
SLIT WIDTH (nm) 0.5  
SLIT HEIGHT NORMAL  
WAVELENGTH (nm) 328.1  
SAMPLE INTRODUCTION SAMPLER AUTOMIXING  
TIME CONSTANT 0.05  
MEASUREMENT TIME (sec) 1.0  
REPLICATES 2  
BACKGROUND CORRECTION ON  
MAXIMUM ABSORBANCE 1.30

FURNACE PARAMETERS

STEP NO.	TEMPERATURE (C)	TIME (sec)	GAS FLOW (L/min)	GAS TYPE	READ COMMAND
1	300	35.0	3.0	NORMAL	NO
2	600	10.0	3.0	NORMAL	NO
3	1000	5.0	3.0	NORMAL	NO
4	1000	5.0	3.0	NORMAL	NO
5	1000	1.0	0.0	NORMAL	NO
6	1900	0.5	0.0	NORMAL	YES
7	1900	2.0	0.0	NORMAL	YES
8	1900	1.0	3.0	NORMAL	NO
9	2600	2.0	3.0	NORMAL	NO
10	40	12.8	3.0	NORMAL	NO

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